Digital Imaging and Communications in Medicine (DICOM)

Part 6: Data Dictionary

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CONTENTS

NOTICE AND DISCLAIMER 2
CONTENTS 3
FOREWORD 4
1 Scope and field of application 5
2 Normative references 5
3 Definitions 5
3.1 DICOM INTRODUCTION AND OVERVIEW DEFINITION 5
3.2 DICOM INFORMATION OBJECT DEFINITION 5
3.3 DICOM DATA STRUCTURES AND ENCODING DEFINITIONS 6
3.4 DICOM DATA DICTIONARY 6
4 Symbols and abbreviations 6
5 Conventions 6
6 Registry of DICOM data elements 9
7 Registry of DICOM File Meta Elements 79
8 Registry of DICOM directory structuring elements 81
Annex A Registry of DICOM unique identifiers (UID) (Normative) 83

FOREWORD

The American College of Radiology (ACR) and the National Electrical Manufacturers Association (NEMA) formed a joint committee to develop a standard for Digital Imaging and Communications in Medicine (DICOM). This DICOM Standard was developed according to the NEMA procedures.

This standard is developed in liaison with other standardization organizations including CEN TC251 in Europe and JIRA in Japan, with review also by other organizations including IEEE, HL7 and ANSI in the USA.

The DICOM Standard is structured as a multi-part document using the guidelines established in the following document:

ISO/IEC Directives, 1989 Part 3 : Drafting and Presentation of International Standards.

This document is one part of the DICOM Standard which consists of the following parts:

PS 3.1: Introduction and Overview
PS 3.2: Conformance
PS 3.3: Information Object Definitions
PS 3.4: Service Class Specifications
PS 3.5: Data Structures and Encoding
PS 3.6: Data Dictionary
PS 3.7: Message Exchange
PS 3.8: Network Communication Support for Message Exchange
PS 3.9: Retired
PS 3.10: Media Storage and File Format for Media Interchange
PS 3.11: Media Storage Application Profiles
PS 3.12: Media Formats and Physical Media for Media Interchange
PS 3.13: Retired
PS 3.14: Grayscale Standard Display Function
PS 3.15: Security and System Management Profiles
PS 3.16: Content Mapping Resource
PS 3.17: Explanatory Information
PS 3.18: Web Access to DICOM Persistent Objects (WADO)

These parts are related but independent documents. Their development level and approval status may differ. Additional parts may be added to this multi-part standard. PS 3.1 should be used as the base reference for the current parts of this standard.

1 Scope and field of application

This part of the DICOM Standard is PS 3.6 of a multi-part standard produced to facilitate the interchange of information between digital imaging computer systems in medical environments. This interchange will enhance diagnostic imaging and potentially other clinical applications. The multi-part DICOM Standard covers the protocols and data that shall be supplied to achieve this interchange of information.

This part of the standard contains the registry of all DICOM Data Elements and all DICOM Unique Identifiers that are defined within the DICOM Standard.

2 Normative references

The following standards contain provisions that, through references in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibilities of applying the most recent editions of the standards indicated below.

ACR-NEMA 300-1988 Digital Imaging and Communications

ISO 8649:1988 Information processing systems - Open Systems Interconnection - Service definition for the Association Control Service Element (ACSE).

ISO 8822:1988 Information processing systems - Open Systems Interconnection - Connection oriented presentation service definition.

ISO/IEC Directives, 1989 Part 3 - Drafting and presentation of International Standards.

3 Definitions

For the purposes of this standard, the following definitions apply.

3.1 DICOM INTRODUCTION AND OVERVIEW DEFINITION

This part of the standard makes use of the following term defined in PS 3.1:

- Attribute

3.2 DICOM INFORMATION OBJECT DEFINITION

This part of the standard makes use of the following term defined in PS 3.3:

- Attribute Tag

3.3 DICOM DATA STRUCTURES AND ENCODING DEFINITIONS

This part of the standard makes use of the following terms defined in PS 3.5:

a. Data Element
b. Data Element Tag
c. Element Number
d. Group Number
e. Repeating Group
f. Retired Data Element
g. Standard Data Element
h. Value Multiplicity (VM)
i. Value Representation (VR)

3.4 DICOM DATA DICTIONARY

The following definition is commonly used in this Standard:

Tag: A unique identifier for an element of information composed of an ordered pair of numbers (a Group Number followed by an Element Number), which is used to identify Attributes and corresponding Data Elements.

4 Symbols and abbreviations

The following symbols and abbreviations are used in this Standard.

ACR American College of Radiology
DICOM Digital Imaging and Communications in Medicine
IOD Information Object Definition
ISO International Standards Organization
NEMA National Electrical Manufacturers Association
OSI Open Systems Interconnection
TCP/IP Transmission Control Protocol/Internet Protocol
UID Unique Identifier
VM Value Multiplicity
VR Value Representation

5 Conventions

Word(s) are capitalized in this document to help the reader understand that these word(s) have been previously defined in Section 3 and are to be interpreted with that meaning.

A Data Element Tag is represented as (gggg,eeee), where gggg equates to the Group Number and eeee equates to the Element Number within that Group. Data Element Tags are represented in hexadecimal notation as specified for each named Data Element in this Standard.

“RET” is used to indicate that the corresponding Data Element, SOP Class, or Transfer Syntax has been retired. Retired items are shown italicized.

Note: The use of retired items is supported in this version of DICOM. However, new implementations are strongly encouraged to implement alternative Data Elements, SOP Classes or Transfer Syntaxes.

6 Registry of DICOM data elements

Tag	Name	VR	VM	
(0008,0001)	*Length to End*			*RET*
(0008,0005)	Specific Character Set	CS	1-n	
(0008,0008)	Image Type	CS	1-n	
(0008,0010)	*Recognition Code*			*RET*
(0008,0012)	Instance Creation Date	DA	1	
(0008,0013)	Instance Creation Time	TM	1	
(0008,0014)	Instance Creator UID	UI	1	
(0008,0016)	SOP Class UID	UI	1	
(0008,0018)	SOP Instance UID	UI	1	
(0008,001A)	Related General SOP Class UID	UI	1-n	
(0008,001B)	Original Specialized SOP Class UID	UI	1	
(0008,0020)	Study Date	DA	1	
(0008,0021)	Series Date	DA	1	
(0008,0022)	Acquisition Date	DA	1	
(0008,0023)	Content Date	DA	1	
(0008,0024)	Overlay Date	DA	1	
(0008,0025)	Curve Date	DA	1	
(0008,002A)	Acquisition Datetime	DT	1	
(0008,0030)	Study Time	TM	1	
(0008,0031)	Series Time	TM	1	
(0008,0032)	Acquisition Time	TM	1	
(0008,0033)	Content Time	TM	1	
(0008,0034)	Overlay Time	TM	1	
(0008,0035)	Curve Time	TM	1	
(0008,0040)	*Data Set Type*			*RET*
(0008,0041)	*Data Set Subtype*			*RET*
(0008,0042)	*Nuclear Medicine Series Type*	*CS*	*1*	*RET*
(0008,0050)	Accession Number	SH	1	

Tag	Name	VR	VM
(0008,0052)	Query/Retrieve Level	CS	1
(0008,0054)	Retrieve AE Title	AE	1-n
(0008,0056)	Instance Availability	CS	1
(0008,0058)	Failed SOP Instance UID List	UI	1-n
(0008,0060)	Modality	CS	1
(0008,0061)	Modalities in Study	CS	1-n
(0008,0062)	SOP Classes in Study	UI	1-n
(0008,0064)	Conversion Type	CS	1
(0008,0068)	Presentation Intent Type	CS	1
(0008,0070)	Manufacturer	LO	1
(0008,0080)	Institution Name	LO	1
(0008,0081)	Institution Address	ST	1
(0008,0082)	Institution Code Sequence	SQ	1
(0008,0090)	Referring Physician’s Name	PN	1
(0008,0092)	Referring Physician's Address	ST	1
(0008,0094)	Referring Physician’s Telephone Numbers	SH	1-n
(0008,0096)	Referring Physician Identification Sequence	SQ	1
(0008,0100)	Code Value	SH	1
(0008,0102)	Coding Scheme Designator	SH	1
(0008,0103)	Coding Scheme Version	SH	1
(0008,0104)	Code Meaning	LO	1
(0008,0105)	Mapping Resource	CS	1
(0008,0106)	Context Group Version	DT	1
(0008,0107)	Context Group Local Version	DT	1
(0008,010B)	Context Group Extension Flag	CS	1
(0008,010C)	Coding Scheme UID	UI	1
(0008,010D)	Context Group Extension Creator UID	UI	1
(0008,010F)	Context Identifier	CS	1
(0008,0110)	Coding Scheme Identification Sequence	SQ	1
(0008,0112)	Coding Scheme Registry	LO	1
(0008,0114)	Coding Scheme External ID	ST	1

Tag	Name	VR	VM	
(0008,0115)	Coding Scheme Name	ST	1	
(0008,0116)	Responsible Organization	ST	1	
(0008,0201)	Timezone Offset From UTC	SH	1	
(0008,1000)	*Network ID*			*RET*
(0008,1010)	Station Name	SH	1	
(0008,1030)	Study Description	LO	1	
(0008,1032)	Procedure Code Sequence	SQ	1	
(0008,103E)	Series Description	LO	1	
(0008,1040)	Institutional Department Name	LO	1	
(0008,1048)	Physician(s) of Record	PN	1-n	
(0008,1049)	Physician(s) of Record Identification Sequence	SQ	1	
(0008,1050)	Performing Physician's Name	PN	1-n	
(0008,1052)	Performing Physician Identification Sequence	SQ	1	
(0008,1060)	Name of Physician(s) Reading Study	PN	1-n	
(0008,1062)	Physician(s) Reading Study Identification Sequence	SQ	1	
(0008,1070)	Operators' Name	PN	1-n	
(0008,1072)	Operator Identification Sequence	SQ	1	
(0008,1080)	Admitting Diagnoses Description	LO	1-n	
(0008,1084)	Admitting Diagnoses Code Sequence	SQ	1	
(0008,1090)	Manufacturer's Model Name	LO	1	
(0008,1100)	Referenced Results Sequence	SQ	1	
(0008,1110)	Referenced Study Sequence	SQ	1	
(0008,1111)	Referenced Performed Procedure Step Sequence	SQ	1	
(0008,1115)	Referenced Series Sequence	SQ	1	
(0008,1120)	Referenced Patient Sequence	SQ	1	
(0008,1125)	Referenced Visit Sequence	SQ	1	
(0008,1130)	Referenced Overlay Sequence	SQ	1	
(0008,113A)	Referenced Waveform Sequence	SQ	1	
(0008,1140)	Referenced Image Sequence	SQ	1	
(0008,1145)	Referenced Curve Sequence	SQ	1	
(0008,114A)	Referenced Instance Sequence	SQ	1	
(0008,1150)	Referenced SOP Class UID	UI	1	

Tag	Name	VR	VM	
(0008,1155)	Referenced SOP Instance UID	UI	1	
(0008,115A)	SOP Classes Supported	UI	1-n	
(0008,1160)	Referenced Frame Number	IS	1-n	
(0008,1195)	Transaction UID	UI	1	
(0008,1197)	Failure Reason	US	1	
(0008,1198)	Failed SOP Sequence	SQ	1	
(0008,1199)	Referenced SOP Sequence	SQ	1	
(0008,1200)	Studies Containing Other Referenced Instances Sequence			
(0008,1250)	Related Series Sequence	SQ	1	
(0008,2110)	*Lossy Image Compression*	*CS*	*1*	*RET*
(0008,2111)	Derivation Description	ST	1	
(0008,2112)	Source Image Sequence	SQ	1	
(0008,2120)	Stage Name	SH	1	
(0008,2122)	Stage Number	IS	1	
(0008,2124)	Number of Stages	IS	1	
(0008,2127)	View Name	SH	1	
(0008,2128)	View Number	IS	1	
(0008,2129)	Number of Event Timers	IS	1	
(0008,212A)	Number of Views in Stage	IS	1	
(0008,2130)	Event Elapsed Time(s)	DS	1-n	
(0008,2132)	Event Timer Name(s)	LO	1-n	
(0008,2142)	Start Trim	IS	1	
(0008,2143)	Stop Trim	IS	1	
(0008,2144)	Recommended Display Frame Rate	IS	1	
(0008,2200)	*Transducer Position*	*CS*	*1*	*RET*
(0008,2204)	*Transducer Orientation*	*CS*	*1*	*RET*
(0008,2208)	*Anatomic Structure*	*CS*	*1*	*RET*
(0008,2218)	Anatomic Region Sequence	SQ	1	
(0008,2220)	Anatomic Region Modifier Sequence	SQ	1	
(0008,2228)	Primary Anatomic Structure Sequence	SQ	1	

Tag	Name	VR	VM	
(0008,2229)	Anatomic Structure, Space or Region Sequence	SQ	1	
(0008,2230)	Primary Anatomic Structure Modifier Sequence	SQ	1	
(0008,2240)	Transducer Position Sequence	SQ	1	
(0008,2242)	Transducer Position Modifier Sequence	SQ	1	
(0008,2244)	Transducer Orientation Sequence	SQ	1	
(0008,2246)	Transducer Orientation Modifier Sequence	SQ	1	
(0008,3001)	Alternate Representation Sequence	SQ	1	
(0008,4000)	*Comments*			*RET*
(0008,9007)	Frame Type	CS	4	
(0008,9092)	Referenced Image Evidence Sequence	SQ	1	
(0008,9121)	Referenced Raw Data Sequence	SQ	1	
(0008,9123)	Creator-Version UID	UI	1	
(0008,9124)	Derivation Image Sequence	SQ	1	
(0008,9154)	Source Image Evidence Sequence	SQ	1	
(0008,9205)	Pixel Presentation	CS	1	
(0008,9206)	Volumetric Properties	CS	1	
(0008,9207)	Volume Based Calculation Technique	CS	1	
(0008,9208)	Complex Image Component	CS	1	
(0008,9209)	Acquisition Contrast	CS	1	
(0008,9215)	Derivation Code Sequence	SQ	1	
(0008,9237)	Referenced Grayscale Presentation State Sequence	SQ	1	

Tag	Name	VR	VM
(0010,0010)	Patient’s Name	PN	1
(0010,0020)	Patient ID	LO	1
(0010,0021)	Issuer of Patient ID	LO	1
(0010,0030)	Patient's Birth Date	DA	1
(0010,0032)	Patient's Birth Time	TM	1
(0010,0040)	Patient's Sex	CS	1
(0010,0050)	Patient's Insurance Plan Code Sequence	SQ	1
(0010,0101)	Patient’s Primary Language Code Sequence	SQ	1

Tag	Name	VR	VM	
(0010,0102)	Patient’s Primary Language Code Modifier Sequence	SQ	1	
(0010,1000)	Other Patient IDs	LO	1-n	
(0010,1001)	Other Patient Names	PN	1-n	
(0010,1005)	Patient's Birth Name	PN	1	
(0010,1010)	Patient's Age	AS	1	
(0010,1020)	Patient's Size	DS	1	
(0010,1030)	Patient's Weight	DS	1	
(0010,1040)	Patient's Address	LO	1	
(0010,1050)	*Insurance Plan Identification*			*RET*
(0010,1060)	Patient's Mother's Birth Name	PN	1	
(0010,1080)	Military Rank	LO	1	
(0010,1081)	Branch of Service	LO	1	
(0010,1090)	Medical Record Locator	LO	1	
(0010,2000)	Medical Alerts	LO	1-n	
(0010,2110)	Contrast Allergies	LO	1-n	
(0010,2150)	Country of Residence	LO	1	
(0010,2152)	Region of Residence	LO	1	
(0010,2154)	Patient’s Telephone Numbers	SH	1-n	
(0010,2160)	Ethnic Group	SH	1	
(0010,2180)	Occupation	SH	1	
(0010,21A0)	Smoking Status	CS	1	
(0010,21B0)	Additional Patient History	LT	1	
(0010,21C0)	Pregnancy Status	US	1	
(0010,21D0)	Last Menstrual Date	DA	1	
(0010,21F0)	Patient's Religious Preference	LO	1	
(0010,4000)	Patient Comments	LT	1	

Tag	Name	VR	VM
(0012,0010)	Clinical Trial Sponsor Name	LO	1
(0012,0020)	Clinical Trial Protocol ID	LO	1
(0012,0021)	Clinical Trial Protocol Name	LO	1

Tag	Name	VR	VM	
(0012,0030)	Clinical Trial Site ID	LO	1	
(0012,0031)	Clinical Trial Site Name	LO	1	
(0012,0040)	Clinical Trial Subject ID	LO	1	
(0012,0042)	Clinical Trial Subject Reading ID	LO	1	
(0012,0050)	Clinical Trial Time Point ID	LO	1	
(0012,0051)	Clinical Trial Time Point Description	ST	1	
(0012,0060)	Clinical Trial Coordinating Center Name	LO	1	

Tag	Name	VR	VM	
(0018,0010)	Contrast/Bolus Agent	LO	1	
(0018,0012)	Contrast/Bolus Agent Sequence	SQ	1	
(0018,0014)	Contrast/Bolus Administration Route Sequence	SQ	1	
(0018,0015)	Body Part Examined	CS	1	
(0018,0020)	Scanning Sequence	CS	1-n	
(0018,0021)	Sequence Variant	CS	1-n	
(0018,0022)	Scan Options	CS	1-n	
(0018,0023)	MR Acquisition Type	CS	1	
(0018,0024)	Sequence Name	SH	1	
(0018,0025)	Angio Flag	CS	1	
(0018,0026)	Intervention Drug Information Sequence	SQ	1	
(0018,0027)	Intervention Drug Stop Time	TM	1	
(0018,0028)	Intervention Drug Dose	DS	1	
(0018,0029)	Intervention Drug Sequence	SQ	1	
(0018,002A)	Additional Drug Sequence	SQ	1	
(0018,0030)	*Radionuclide*	*LO*	*1-n*	*RET*
(0018,0031)	Radiopharmaceutical	LO	1	
(0018,0032)	*Energy Window Centerline*	*DS*	*1*	*RET*
(0018,0033)	*Energy Window Total Width*	*DS*	*1-n*	*RET*
(0018,0034)	Intervention Drug Name	LO	1	
(0018,0035)	Intervention Drug Start Time	TM	1	
(0018,0036)	Intervention Sequence	SQ	1	

Tag	Name	VR	VM	
(0018,0037)	*Therapy Type*	*CS*	*1*	*RET*
(0018,0038)	Intervention Status	CS	1	
(0018,0039)	*Therapy Description*	*CS*	*1*	*RET*
(0018,003A)	Intervention Description	ST	1	
(0018,0040)	Cine Rate	IS	1	
(0018,0050)	Slice Thickness	DS	1	
(0018,0060)	KVP	DS	1	
(0018,0070)	Counts Accumulated	IS	1	
(0018,0071)	Acquisition Termination Condition	CS	1	
(0018,0072)	Effective Duration	DS	1	
(0018,0073)	Acquisition Start Condition	CS	1	
(0018,0074)	Acquisition Start Condition Data	IS	1	
(0018,0075)	Acquisition Termination Condition Data	IS	1	
(0018,0080)	Repetition Time	DS	1	
(0018,0081)	Echo Time	DS	1	
(0018,0082)	Inversion Time	DS	1	
(0018,0083)	Number of Averages	DS	1	
(0018,0084)	Imaging Frequency	DS	1	
(0018,0085)	Imaged Nucleus	SH	1	
(0018,0086)	Echo Number(s)	IS	1-n	
(0018,0087)	Magnetic Field Strength	DS	1	
(0018,0088)	Spacing Between Slices	DS	1	
(0018,0089)	Number of Phase Encoding Steps	IS	1	
(0018,0090)	Data Collection Diameter	DS	1	
(0018,0091)	Echo Train Length	IS	1	
(0018,0093)	Percent Sampling	DS	1	
(0018,0094)	Percent Phase Field of View	DS	1	
(0018,0095)	Pixel Bandwidth	DS	1	
(0018,1000)	Device Serial Number	LO	1	
(0018,1004)	Plate ID	LO	1	
(0018,1010)	Secondary Capture Device ID	LO	1	

Tag	Name	VR	VM
(0018,1011)	Hardcopy Creation Device ID	LO	1
(0018,1012)	Date of Secondary Capture	DA	1
(0018,1014)	Time of Secondary Capture	TM	1
(0018,1016)	Secondary Capture Device Manufacturer	LO	1
(0018,1017)	Hardcopy Device Manufacturer	LO	1
(0018,1018)	Secondary Capture Device Manufacturer's Model Name	LO	1
(0018,1019)	Secondary Capture Device Software Version(s)	LO	1-n
(0018,101A)	Hardcopy Device Software Version	LO	1-n
(0018,101B)	Hardcopy Device Manfuacturer's Model Name	LO	1
(0018,1020)	Software Version(s)	LO	1-n
(0018,1022)	Video Image Format Acquired	SH	1
(0018,1023)	Digital Image Format Acquired	LO	1
(0018,1030)	Protocol Name	LO	1
(0018,1040)	Contrast/Bolus Route	LO	1
(0018,1041)	Contrast/Bolus Volume	DS	1
(0018,1042)	Contrast/Bolus Start Time	TM	1
(0018,1043)	Contrast/Bolus Stop Time	TM	1
(0018,1044)	Contrast/Bolus Total Dose	DS	1
(0018,1045)	Syringe Counts	IS	1
(0018,1046)	Contrast Flow Rate	DS	1-n
(0018,1047)	Contrast Flow Duration	DS	1-n
(0018,1048)	Contrast/Bolus Ingredient	CS	1
(0018,1049)	Contrast/Bolus Ingredient Concentration	DS	1
(0018,1050)	Spatial Resolution	DS	1
(0018,1060)	Trigger Time	DS	1
(0018,1061)	Trigger Source or Type	LO	1
(0018,1062)	Nominal Interval	IS	1
(0018,1063)	Frame Time	DS	1
(0018,1064)	Framing Type	LO	1
(0018,1065)	Frame Time Vector	DS	1-n
(0018,1066)	Frame Delay	DS	1
(0018,1067)	Image Trigger Delay	DS	1

Tag	Name	VR	VM
(0018,1068)	Multiplex Group Time Offset	DS	1
(0018,1069)	Trigger Time Offset	DS	1
(0018,106A)	Synchronization Trigger	CS	1
(0018,106C)	Synchronization Channel	US	2
(0018,106E)	Trigger Sample Position	UL	1
(0018,1070)	Radiopharmaceutical Route	LO	1
(0018,1071)	Radiopharmaceutical Volume	DS	1
(0018,1072)	Radiopharmaceutical Start Time	TM	1
(0018,1073)	Radiopharmaceutical Stop Time	TM	1
(0018,1074)	Radionuclide Total Dose	DS	1
(0018,1075)	Radionuclide Half Life	DS	1
(0018,1076)	Radionuclide Positron Fraction	DS	1
(0018,1077)	Radiopharmaceutical Specific Activity	DS	1
(0018,1080)	Beat Rejection Flag	CS	1
(0018,1081)	Low R-R Value	IS	1
(0018,1082)	High R-R Value	IS	1
(0018,1083)	Intervals Acquired	IS	1
(0018,1084)	Intervals Rejected	IS	1
(0018,1085)	PVC Rejection	LO	1
(0018,1086)	Skip Beats	IS	1
(0018,1088)	Heart Rate	IS	1
(0018,1090)	Cardiac Number of Images	IS	1
(0018,1094)	Trigger Window	IS	1
(0018,1100)	Reconstruction Diameter	DS	1
(0018,1110)	Distance Source to Detector	DS	1
(0018,1111)	Distance Source to Patient	DS	1
(0018,1114)	Estimated Radiographic Magnification Factor	DS	1
(0018,1120)	Gantry/Detector Tilt	DS	1
(0018,1121)	Gantry/Detector Slew	DS	1
(0018,1130)	Table Height	DS	1
(0018,1131)	Table Traverse	DS	1

Tag	Name	VR	VM	
(0018,1134)	Table Motion	CS	1	
(0018,1135)	Table Vertical Increment	DS	1-n	
(0018,1136)	Table Lateral Increment	DS	1-n	
(0018,1137)	Table Longitudinal Increment	DS	1-n	
(0018,1138)	Table Angle	DS	1	
(0018,113A)	Table Type	CS	1	
(0018,1140)	Rotation Direction	CS	1	
(0018,1141)	Angular Position	DS	1	
(0018,1142)	Radial Position	DS	1-n	
(0018,1143)	Scan Arc	DS	1	
(0018,1144)	Angular Step	DS	1	
(0018,1145)	Center of Rotation Offset	DS	1	
(0018,1146)	*Rotation Offset*	*DS*	*1-n*	*RET*
(0018,1147)	Field of View Shape	CS	1	
(0018,1149)	Field of View Dimension(s)	IS	1-2	
(0018,1150)	Exposure Time	IS	1	
(0018,1151)	X-ray Tube Current	IS	1	
(0018,1152)	Exposure	IS	1	
(0018,1153)	Exposure in uAs	IS	1	
(0018,1154)	Average Pulse Width	DS	1	
(0018,1155)	Radiation Setting	CS	1	
(0018,1156)	Rectification Type	CS	1	
(0018,115A)	Radiation Mode	CS	1	
(0018,115E)	Image Area Dose Product	DS	1	
(0018,1160)	Filter Type	SH	1	
(0018,1161)	Type of Filters	LO	1-n	
(0018,1162)	Intensifier Size	DS	1	
(0018,1164)	Imager Pixel Spacing	DS	2	
(0018,1166)	Grid	CS	1-n	
(0018,1170)	Generator Power	IS	1	
(0018,1180)	Collimator/grid Name	SH	1	
(0018,1181)	Collimator Type	CS	1	

Tag	Name	VR	VM	
(0018,1182)	Focal Distance	IS	1-2	
(0018,1183)	X Focus Center	DS	1-2	
(0018,1184)	Y Focus Center	DS	1-2	
(0018,1190)	Focal Spot(s)	DS	1-n	
(0018,1191)	Anode Target Material	CS	1	
(0018,11A0)	Body Part Thickness	DS	1	
(0018,11A2)	Compression Force	DS	1	
(0018,1200)	Date of Last Calibration	DA	1-n	
(0018,1201)	Time of Last Calibration	TM	1-n	
(0018,1210)	Convolution Kernel	SH	1-n	
(0018,1240)	*Upper/Lower Pixel Values*			*RET*
(0018,1242)	Actual Frame Duration	IS	1	
(0018,1243)	Count Rate	IS	1	
(0018,1244)	Preferred Playback Sequencing	US	1	
(0018,1250)	Receive Coil Name	SH	1	
(0018,1251)	Transmit Coil Name	SH	1	
(0018,1260)	Plate Type	SH	1	
(0018,1261)	Phosphor Type	LO	1	
(0018,1300)	Scan Velocity	DS	1	
(0018,1301)	Whole Body Technique	CS	1-n	
(0018,1302)	Scan Length	IS	1	
(0018,1310)	Acquisition Matrix	US	4	
(0018,1312)	In-plane Phase Encoding Direction	CS	1	
(0018,1314)	Flip Angle	DS	1	
(0018,1315)	Variable Flip Angle Flag	CS	1	
(0018,1316)	SAR	DS	1	
(0018,1318)	dB/dt	DS	1	
(0018,1400)	Acquisition Device Processing Description	LO	1	
(0018,1401)	Acquisition Device Processing Code	LO	1	
(0018,1402)	Cassette Orientation	CS	1	
(0018,1403)	Cassette Size	CS	1	

Tag	Name	VR	VM
(0018,1404)	Exposures on Plate	US	1
(0018,1405)	Relative X-ray Exposure	IS	1
(0018,1450)	Column Angulation	DS	1
(0018,1460)	Tomo Layer Height	DS	1
(0018,1470)	Tomo Angle	DS	1
(0018,1480)	Tomo Time	DS	1
(0018,1490)	Tomo Type	CS	1
(0018,1491)	Tomo Class	CS	1
(0018,1495)	Number of Tomosynthesis Source Images	IS	1
(0018,1500)	Positioner Motion	CS	1
(0018,1508)	Positioner Type	CS	1
(0018,1510)	Positioner Primary Angle	DS	1
(0018,1511)	Positioner Secondary Angle	DS	1
(0018,1520)	Positioner Primary Angle Increment	DS	1-n
(0018,1521)	Positioner Secondary Angle Increment	DS	1-n
(0018,1530)	Detector Primary Angle	DS	1
(0018,1531)	Detector Secondary Angle	DS	1
(0018,1600)	Shutter Shape	CS	1-3
(0018,1602)	Shutter Left Vertical Edge	IS	1
(0018,1604)	Shutter Right Vertical Edge	IS	1
(0018,1606)	Shutter Upper Horizontal Edge	IS	1
(0018,1608)	Shutter Lower Horizontal Edge	IS	1
(0018,1610)	Center of Circular Shutter	IS	2
(0018,1612)	Radius of Circular Shutter	IS	1
(0018,1620)	Vertices of the Polygonal Shutter	IS	2-2n
(0018,1622)	Shutter Presentation Value	US	1
(0018,1623)	Shutter Overlay Group	US	1
(0018,1700)	Collimator Shape	CS	1-3
(0018,1702)	Collimator Left Vertical Edge	IS	1
(0018,1704)	Collimator Right Vertical Edge	IS	1
(0018,1706)	Collimator Upper Horizontal Edge	IS	1
(0018,1708)	Collimator Lower Horizontal Edge	IS	1

Tag	Name	VR	VM	
(0018,1710)	Center of Circular Collimator	IS	2	
(0018,1712)	Radius of Circular Collimator	IS	1	
(0018,1720)	Vertices of the Polygonal Collimator	IS	2-2n	
(0018,1800)	Acquisition Time Synchronized	CS	1	
(0018,1801)	Time Source	SH	1	
(0018,1802)	Time Distribution Protocol	CS	1	
(0018,1803)	NTP Source Address	LO	1	
(0018,2001)	Page Number Vector	IS	1-n	
(0018,2002)	Frame Label Vector	SH	1-n	
(0018,2003)	Frame Primary Angle Vector	DS	1-n	
(0018,2004)	Frame Secondary Angle Vector	DS	1-n	
(0018,2005)	Slice Location Vector	DS	1-n	
(0018,2006)	Display Window Label Vector	SH	1-n	
(0018,2010)	Nominal Scanned Pixel Spacing	DS	2	
(0018,2020)	Digitizing Device Transport Direction	CS	1	
(0018,2030)	Rotation of Scanned Film	DS	1	
(0018,3100)	IVUS Acquisition	CS	1	
(0018,3101)	IVUS Pullback Rate	DS	1	
(0018,3102)	IVUS Gated Rate	DS	1	
(0018,3103)	IVUS Pullback Start Frame Number	IS	1	
(0018,3104)	IVUS Pullback Stop Frame Number	IS	1	
(0018,3105)	Lesion Number	IS	1-n	
(0018,4000)	*Comments*			*RET*
(0018,5000)	Output Power	SH	1-n	
(0018,5010)	Transducer Data	LO	3	
(0018,5012)	Focus Depth	DS	1	
(0018,5020)	Processing Function	LO	1	
(0018,5021)	Postprocessing Function	LO	1	
(0018,5022)	Mechanical Index	DS	1	
(0018,5024)	Bone Thermal Index	DS	1	
(0018,5026)	Cranial Thermal Index	DS	1	

Tag	Name	VR	VM	
(0018,5027)	Soft Tissue Thermal Index	DS	1	
(0018,5028)	Soft Tissue-focus Thermal Index	DS	1	
(0018,5029)	Soft Tissue-surface Thermal Index	DS	1	
(0018,5030)	*Dynamic Range*			*RET*
(0018,5040)	*Total Gain*			*RET*
(0018,5050)	Depth of Scan Field	IS	1	
(0018,5100)	Patient Position	CS	1	
(0018,5101)	View Position	CS	1	
(0018,5104)	Projection Eponymous Name Code Sequence	SQ	1	
(0018,5210)	*Image Transformation Matrix*	*DS*	*6*	*RET*
(0018,5212)	*Image Translation Vector*	*DS*	*3*	*RET*
(0018,6000)	Sensitivity	DS	1	
(0018,6011)	Sequence of Ultrasound Regions	SQ	1	
(0018,6012)	Region Spatial Format	US	1	
(0018,6014)	Region Data Type	US	1	
(0018,6016)	Region Flags	UL	1	
(0018,6018)	Region Location Min X_0	UL	1	
(0018,601A)	Region Location Min Y_0	UL	1	
(0018,601C)	Region Location Max X_1	UL	1	
(0018,601E)	Region Location Max Y_1	UL	1	
(0018,6020)	Reference Pixel X_0	SL	1	
(0018,6022)	Reference Pixel Y_0	SL	1	
(0018,6024)	Physical Units X Direction	US	1	
(0018,6026)	Physical Units Y Direction	US	1	
(0018,6028)	Reference Pixel Physical Value X	FD	1	
(0018,602A)	Reference Pixel Physical Value Y	FD	1	
(0018,602C)	Physical Delta X	FD	1	
(0018,602E)	Physical Delta Y	FD	1	
(0018,6030)	Transducer Frequency	UL	1	
(0018,6031)	Transducer Type	CS	1	
(0018,6032)	Pulse Repetition Frequency	UL	1	

Tag	Name	VR	VM	
(0018,6034)	Doppler Correction Angle	FD	1	
(0018,6036)	Steering Angle	FD	1	
(0018,6038)	*Doppler Sample Volume X Position*	*UL*	*1*	*RET*
(0018,6039)	Doppler Sample Volume X Position	SL	1	
(0018,603A)	*Doppler Sample Volume Y Position*	*UL*	*1*	*RET*
(0018,603B)	Doppler Sample Volume Y Position	SL	1	
(0018,603C)	*TM-Line Position X_0*	*UL*	*1*	*RET*
(0018,603D)	TM-Line Position X_0	SL	1	
(0018,603E)	*TM-Line Position Y_0*	*UL*	*1*	*RET*
(0018,603F)	TM-Line Position Y_0	SL	1	
(0018,6040)	*TM-Line Position X_1*	*UL*	*1*	*RET*
(0018,6041)	TM-Line Position X_1	SL	1	
(0018,6042)	*TM-Line Position Y_1*	*UL*	*1*	*RET*
(0018,6043)	TM-Line Position Y_1	SL	1	
(0018,6044)	Pixel Component Organization	US	1	
(0018,6046)	Pixel Component Mask	UL	1	
(0018,6048)	Pixel Component Range Start	UL	1	
(0018,604A)	Pixel Component Range Stop	UL	1	
(0018,604C)	Pixel Component Physical Units	US	1	
(0018,604E)	Pixel Component Data Type	US	1	
(0018,6050)	Number of Table Break Points	UL	1	
(0018,6052)	Table of X Break Points	UL	1-n	
(0018,6054)	Table of Y Break Points	FD	1-n	
(0018,6056)	Number of Table Entries	UL	1	
(0018,6058)	Table of Pixel Values	UL	1-n	
(0018,605A)	Table of Parameter Values	FL	1-n	
(0018,6060)	R Wave Time Vector	FL	1-n	
(0018,7000)	Detector Conditions Nominal Flag	CS	1	
(0018,7001)	Detector Temperature	DS	1	
(0018,7004)	Detector Type	CS	1	
(0018,7005)	Detector Configuration	CS	1	

Tag	Name	VR	VM
(0018,7006)	Detector Description	LT	1
(0018,7008)	Detector Mode	LT	1
(0018,700A)	Detector ID	SH	1
(0018,700C)	Date of Last Detector Calibration	DA	1
(0018,700E)	Time of Last Detector Calibration	TM	1
(0018,7010)	Exposures on Detector Since Last Calibration	IS	1
(0018,7011)	Exposures on Detector Since Manufactured	IS	1
(0018,7012)	Detector Time Since Last Exposure	DS	1
(0018,7014)	Detector Active Time	DS	1
(0018,7016)	Detector Activation Offset From Exposure	DS	1
(0018,701A)	Detector Binning	DS	2
(0018,7020)	Detector Element Physical Size	DS	2
(0018,7022)	Detector Element Spacing	DS	2
(0018,7024)	Detector Active Shape	CS	1
(0018,7026)	Detector Active Dimension(s)	DS	1-2
(0018,7028)	Detector Active Origin	DS	2
(0018,702A)	Detector Manufacturer Name	LO	1
(0018,702B)	Detector Manufacturer’s Model Name	LO	1
(0018,7030)	Field of View Origin	DS	2
(0018,7032)	Field of View Rotation	DS	1
(0018,7034)	Field of View Horizontal Flip	CS	1
(0018,7040)	Grid Absorbing Material	LT	1
(0018,7041)	Grid Spacing Material	LT	1
(0018,7042)	Grid Thickness	DS	1
(0018,7044)	Grid Pitch	DS	1
(0018,7046)	Grid Aspect Ratio	IS	2
(0018,7048)	Grid Period	DS	1
(0018,704C)	Grid Focal Distance	DS	1
(0018,7050)	Filter Material	CS	1-n
(0018,7052)	Filter Thickness Minimum	DS	1-n
(0018,7054)	Filter Thickness Maximum	DS	1-n
(0018,7060)	Exposure Control Mode	CS	1

Tag	Name	VR	VM
(0018,7062)	Exposure Control Mode Description	LT	1
(0018,7064)	Exposure Status	CS	1
(0018,7065)	Phototimer Setting	DS	1
(0018,8150)	Exposure Time in μS	DS	1
(0018,8151)	X-Ray Tube Current in μA	DS	1
(0018,9004)	Content Qualification	CS	1
(0018,9005)	Pulse Sequence Name	SH	1
(0018,9006)	MR Imaging Modifier Sequence	SQ	1
(0018,9008)	Echo Pulse Sequence	CS	1
(0018,9009)	Inversion Recovery	CS	1
(0018,9010)	Flow Compensation	CS	1
(0018,9011)	Multiple Spin Echo	CS	1
(0018,9012)	Multi-planar Excitation	CS	1
(0018,9014)	Phase Contrast	CS	1
(0018,9015)	Time of Flight Contrast	CS	1
(0018,9016)	Spoiling	CS	1
(0018,9017)	Steady State Pulse Sequence	CS	1
(0018,9018)	Echo Planar Pulse Sequence	CS	1
(0018,9019)	Tag Angle First Axis	FD	1
(0018,9020)	Magnetization Transfer	CS	1
(0018,9021)	T2 Preparation	CS	1
(0018,9022)	Blood Signal Nulling	CS	1
(0018,9024)	Saturation Recovery	CS	1
(0018,9025)	Spectrally Selected Suppression	CS	1
(0018,9026)	Spectrally Selected Excitation	CS	1
(0018,9027)	Spatial Pre-saturation	CS	1
(0018,9028)	Tagging	CS	1
(0018,9029)	Oversampling Phase	CS	1
(0018,9022)	Blood Signal Nulling	CS	1
(0018,9030)	Tag Spacing First Dimension	FD	1
(0018,9032)	Geometry of k-Space Traversal	CS	1

Tag	Name	VR	VM
(0018,9033)	Segmented k-Space Traversal	CS	1
(0018,9034)	Rectilinear Phase Encode Reordering	CS	1
(0018,9035)	Tag Thickness	FD	1
(0018,9036)	Partial Fourier Direction	CS	1
(0018,9037)	Cardiac Synchronization Technique	CS	1
(0018,9041)	Receive Coil Manufacturer Name	LO	1
(0018,9042)	MR Receive Coil Sequence	SQ	1
(0018,9043)	Receive Coil Type	CS	1
(0018,9044)	Quadrature Receive Coil	CS	1
(0018,9045)	Multi-Coil Definition Sequence	SQ	1
(0018,9046)	Multi-Coil Configuration	LO	1
(0018,9047)	Multi-Coil Element Name	SH	1
(0018,9048)	Multi-Coil Element Used	CS	1
(0018,9049)	MR Transmit Coil Sequence	SQ	1
(0018,9050)	Transmit Coil Manufacturer Name	LO	1
(0018,9051)	Transmit Coil Type	CS	1
(0018,9052)	Spectral Width	FD	1-2
(0018,9053)	Chemical Shift Reference	FD	1-2
(0018,9054)	Volume Localization Technique	CS	1
(0018,9058)	MR Acquisition Frequency Encoding Steps	US	1
(0018,9059)	De-coupling	CS	1
(0018,9060)	De-coupled Nucleus	CS	1-2
(0018,9061)	De-coupling Frequency	FD	1-2
(0018,9062)	De-coupling Method	CS	1
(0018,9063)	De-coupling Chemical Shift Reference	FD	1-2
(0018,9064)	k-space Filtering	CS	1
(0018,9065)	Time Domain Filtering	CS	1-2
(0018,9066)	Number of Zero fills	US	1-2
(0018,9067)	Baseline Correction	CS	1
(0018,9069)	Parallel Reduction Factor In-plane	FD	1
(0018,9070)	Cardiac R-R Interval Specified	FD	1
(0018,9073)	Acquisition Duration	FD	1

Tag	Name	VR	VM
(0018,9074)	Frame Acquisition Datetime	DT	1
(0018,9075)	Diffusion Directionality	CS	1
(0018,9076)	Diffusion Gradient Direction Sequence	SQ	1
(0018,9077)	Parallel Acquisition	CS	1
(0018,9078)	Parallel Acquisition Technique	CS	1
(0018,9079)	Inversion Times	FD	1-n
(0018,9080)	Metabolite Map Description	ST	1
(0018,9081)	Partial Fourier	CS	1
(0018,9082)	Effective Echo Time	FD	1
(0018,9083)	Metabolite Map Code Sequence	SQ	1
(0018,9084)	Chemical Shift Sequence	SQ	1
(0018,9085)	Cardiac Signal Source	CS	1
(0018,9087)	Diffusion b-value	FD	1
(0018,9089)	Diffusion Gradient Orientation	FD	3
(0018,9090)	Velocity Encoding Direction	FD	3
(0018,9091)	Velocity Encoding Minimum Value	FD	1
(0018,9093)	Number of k-Space Trajectories	US	1
(0018,9094)	Coverage of k-Space	CS	1
(0018,9095)	Spectroscopy Acquisition Phase Rows	UL	1
(0018,9098)	Transmitter Frequency	FD	1-2
(0018,9100)	Resonant Nucleus	CS	1-2
(0018,9101)	Frequency Correction	CS	1
(0018,9103)	MR Spectroscopy FOV/Geometry Sequence	SQ	1
(0018,9104)	Slab Thickness	FD	1
(0018,9105)	Slab Orientation	FD	3
(0018,9106)	Mid Slab Position	FD	3
(0018,9107)	MR Spatial Saturation Sequence	SQ	1
(0018,9112)	MR Timing and Related Parameters Sequence	SQ	1
(0018,9114)	MR Echo Sequence	SQ	1
(0018,9115)	MR Modifier Sequence	SQ	1
(0018,9117)	MR Diffusion Sequence	SQ	1

Tag	Name	VR	VM	
(0018,9118)	Cardiac Trigger Sequence	SQ	1	
(0018,9119)	MR Averages Sequence	SQ	1	
(0018,9125)	MR FOV/Geometry Sequence	SQ	1	
(0018,9126)	Volume Localization Sequence	SQ	1	
(0018,9127)	Spectroscopy Acquisition Data Columns	UL	1	
(0018,9147)	Diffusion Anisotropy Type	CS	1	
(0018,9151)	Frame Reference Datetime	DT	1	
(0018,9152)	MR Metabolite Map Sequence	SQ	1	
(0018,9155)	Parallel Reduction Factor out-of-plane	FD	1	
(0018,9159)	Spectroscopy Acquisition Out-of-plane Phase Steps	UL	1	
(0018,9166)	Bulk Motion Status	CS	1	
(0018,9168)	Parallel Reduction Factor Second In-plane	FD	1	
(0018,9169)	Cardiac Beat Rejection Technique	CS	1	
(0018,9170)	Respiratory Motion Compensation Technique	CS	1	
(0018,9171)	Respiratory Signal Source	CS	1	
(0018,9172)	Bulk Motion Compensation Technique	CS	1	
(0018,9173)	Bulk Motion Signal Source	CS	1	
(0018,9174)	Applicable Safety Standard Agency	CS	1	
(0018,9175)	Applicable Safety Standard Description	LO	1	
(0018,9176)	Operating Mode Sequence	SQ	1	
(0018,9177)	Operating Mode Type	CS	1	
(0018,9178)	Operating Mode	CS	1	
(0018,9179)	Specific Absorption Rate Definition	CS	1	
(0018,9180)	Gradient Output Type	CS	1	
(0018,9181)	Specific Absorption Rate Value	FD	1	
(0018,9182)	Gradient Output	FD	1	
(0018,9183)	Flow Compensation Direction	CS	1	
(0018,9184)	Tagging Delay	FD	1	
(0018,9195)	*Chemical Shifts Minimum Integration Limit in Hz*	*FD*	*1*	*Retired*
(0018,9196)	*Chemical Shifts Maximum Integration Limit in Hz*	*FD*	*1*	*Retired*
(0018,9197)	MR Velocity Encoding Sequence	SQ	1	
(0018,9198)	First Order Phase Correction	CS	1	

Tag	Name	VR	VM
(0018,9199)	Water Referenced Phase Correction	CS	1
(0018,9200)	MR Spectroscopy Acquisition Type	CS	1
(0018,9214)	Respiratory Cycle Position	CS	1
(0018,9217)	Velocity Encoding Maximum Value	FD	1
(0018,9218)	Tag Spacing Second Dimension	FD	1
(0018,9219)	Tag Angle Second Axis	SS	1
(0018,9220)	Frame Acquisition Duration	FD	1
(0018,9226)	MR Image Frame Type Sequence	SQ	1
(0018,9227)	MR Spectroscopy Frame Type Sequence	SQ	1
(0018,9231)	MR Acquisition Phase Encoding Steps in-plane	US	1
(0018,9232)	MR Acquisition Phase Encoding Steps out-of-plane	US	1
(0018,9234)	Spectroscopy Acquisition Phase Columns	UL	1
(0018,9236)	Cardiac Cycle Position	CS	1
(0018,9239)	Specific Absorption Rate Sequence	SQ	1
(0018,9295)	Chemical Shifts Minimum Integration Limit in ppm	FD	1
(0018,9296)	Chemical Shifts Maximum Integration Limit in ppm	FD	1
(0018,9240)	RF Echo Train Length	US	1
(0018,9241)	Gradient Echo Train Length	US	1
(0018,9301)	CT Acquisition Type Sequence	SQ	1
(0018,9302)	Acquisition Type	CS	1
(0018,9303)	Tube Angle	FD	1
(0018,9304)	CT Acquisition Details Sequence	SQ	1
(0018,9305)	Revolution Time	FD	1
(0018,9306)	Single Collimation Width	FD	1
(0018,9307)	Total Collimation Width	FD	1
(0018,9308)	CT Table Dynamics Sequence	SQ	1
(0018,9309)	Table Speed	FD	1
(0018,9310)	Table Feed per Rotation	FD	1
(0018,9311)	Spiral Pitch Factor	FD	1
(0018,9312)	CT Geometry Sequence	SQ	1
(0018,9313)	Data Collection Center (Patient)	FD	3

Tag	Name	VR	VM
(0018,9314)	CT Reconstruction Sequence	SQ	1
(0018,9315)	Reconstruction Algorithm	CS	1
(0018,9316)	Convolution Kernel Group	CS	1
(0018,9317)	Reconstruction Field of View	FD	2
(0018,9318)	Reconstruction Target Center (Patient)	FD	3
(0018,9319)	Reconstruction Angle	FD	1
(0018,9320)	Image Filter	SH	1
(0018,9321)	CT Exposure Sequence	SQ	1
(0018,9322)	Reconstruction Pixel Spacing	FD	2
(0018,9323)	Exposure Modulation Type	CS	1
(0018,9324)	Estimated Dose Saving	FD	1
(0018,9325)	CT X-ray Details Sequence	SQ	1
(0018,9326)	CT Position Sequence	SQ	1
(0018,9327)	Table Position	FD	1
(0018,9328)	Exposure Time in ms	FD	1
(0018,9329)	CT Image Frame Type Sequence	SQ	1
(0018,9330)	X-Ray Tube Current in mA	FD	1
(0018,9332)	Exposure in mAs	FD	1
(0018,9333)	Constant Volume Flag	CS	1
(0018,9334)	Fluoroscopy Flag	CS	1
(0018,9335)	Distance Source to Data Collection Center	FD	1
(0018,9337)	Contrast/Bolus Agent Number	US	1
(0018,9338)	Contrast/Bolus Ingredient Code Sequence	SQ	1
(0018,9340)	Contrast Administration Profile Sequence	SQ	1
(0018,9341)	Contrast/Bolus Usage Sequence	SQ	1
(0018,9342)	Contrast/Bolus Agent Administered	CS	1
(0018,9343)	Contrast/Bolus Agent Detected	CS	1
(0018,9344)	Contrast/Bolus Agent Phase	CS	1
(0018,9345)	CTDIvol	FD	1
(0018,A001)	Contributing Equipment Sequence	SQ	1
(0018,A002)	Contribution DateTime	DT	1

Tag	Name	VR	VM	
(0018,A003)	Contribution Description	ST	1	

Tag	Name	VR	VM	
(0020,000D)	Study Instance UID	UI	1	
(0020,000E)	Series Instance UID	UI	1	
(0020,0010)	Study ID	SH	1	
(0020,0011)	Series Number	IS	1	
(0020,0012)	Acquisition Number	IS	1	
(0020,0013)	Instance Number	IS	1	
(0020,0014)	*Isotope Number*	*IS*	*1*	*RET*
(0020,0015)	*Phase Number*	*IS*	*1*	*RET*
(0020,0016)	*Interval Number*	*IS*	*1*	*RET*
(0020,0017)	*Time Slot Number*	*IS*	*1*	*RET*
(0020,0018)	*Angle Number*	*IS*	*1*	*RET*
(0020,0019)	Item Number	IS	1	
(0020,0020)	Patient Orientation	CS	2	
(0020,0022)	Overlay Number	IS	1	
(0020,0024)	Curve Number	IS	1	
(0020,0026)	Lookup Table Number	IS	1	
(0020,0030)	*Image Position*			*RET*
(0020,0032)	Image Position (Patient)	DS	3	
(0020,0035)	*Image Orientation*			*RET*
(0020,0037)	Image Orientation (Patient)	DS	6	
(0020,0050)	*Location*			*RET*
(0020,0052)	Frame of Reference UID	UI	1	
(0020,0060)	Laterality	CS	1	
(0020,0062)	Image Laterality	CS	1	
(0020,0070)	*Image Geometry Type*			*RET*
(0020,0080)	*Masking Image*			*RET*
(0020,0100)	Temporal Position Identifier	IS	1	
(0020,0105)	Number of Temporal Positions	IS	1	

Tag	Name	VR	VM	
(0020,0110)	Temporal Resolution	DS	1	
(0020,0200)	Synchronization Frame of Reference UID	UI	1	
(0020,1000)	Series in Study	IS	1	
(0020,1001)	*Acquisitions in Series*			*RET*
(0020,1002)	Images in Acquisition	IS	1	
(0020,1004)	Acquisitions in Study	IS	1	
(0020,1020)	*Reference*			*RET*
(0020,1040)	Position Reference Indicator	LO	1	
(0020,1041)	Slice Location	DS	1	
(0020,1070)	Other Study Numbers	IS	1-n	
(0020,1200)	Number of Patient Related Studies	IS	1	
(0020,1202)	Number of Patient Related Series	IS	1	
(0020,1204)	Number of Patient Related Instances	IS	1	
(0020,1206)	Number of Study Related Series	IS	1	
(0020,1208)	Number of Study Related Instances	IS	1	
(0020,1209)	Number of Series Related Instances	IS	1	
(0020,3100 to 31FF)	*Source Image Ids*			*RET*
(0020,3401)	*Modifying Device ID*			*RET*
(0020,3402)	*Modified Image ID*			*RET*
(0020,3403)	*Modified Image Date*			*RET*
(0020,3404)	*Modifying Device Manufacturer*			*RET*
(0020,3405)	*Modified Image Time*			*RET*
(0020,3406)	*Modified Image Description*			*RET*
(0020,4000)	Image Comments	LT	1	
(0020,5000)	*Original Image Identification*			*RET*
(0020,5002)	*Original Image Identification Nomenclature*			*RET*
(0020,9056)	Stack ID	SH	1	
(0020,9057)	In-Stack Position Number	UL	1	
(0020,9071)	Frame Anatomy Sequence	SQ	1	
(0020,9072)	Frame Laterality	CS	1	
(0020,9111)	Frame Content Sequence	SQ	1	

Tag	Name	VR	VM
(0020,9113)	Plane Position Sequence	SQ	1
(0020,9116)	Plane Orientation Sequence	SQ	1
(0020,9128)	Temporal Position Index	UL	1
(0020,9153)	Trigger Delay Time	FD	1
(0020,9156)	Frame Acquisition Number	US	1
(0020,9157)	Dimension Index Values	UL	1-n
(0020,9158)	Frame Comments	LT	1
(0020,9161)	Concatenation UID	UI	1
(0020,9162)	In-concatenation Number	US	1
(0020,9163)	In-concatenation Total Number	US	1
(0020,9164)	Dimension Organization UID	UI	1
(0020,9165)	Dimension Index Pointer	AT	1
(0020,9167)	Functional Group Pointer	AT	1
(0020,9213)	Dimension Index Private Creator	LO	1
(0020,9221)	Dimension Organization Sequence	SQ	1
(0020,9222)	Dimension Index Sequence	SQ	1
(0020,9228)	Concatenation Frame Offset Number	UL	1
(0020,9238)	Functional Group Private Creator	LO	1

Tag	Name	VR	VM
(0022,0001)	Light Path Filter Pass-Through Wavelength	US	1
(0022,0002)	Light Path Filter Pass Band	US	2
(0022,0003)	Image Path Filter Pass-Through Wavelength	US	1
(0022,0004)	Image Path Filter Pass Band	US	2
(0022,0005)	Patient Eye Movement Commanded	CS	1
(0022,0006)	Patient Eye Movement Command Code Sequence	SQ	1
(0022,0007)	Spherical Lens Power	FL	1
(0022,0008)	Cylinder Lens Power	FL	1
(0022,0009)	Cylinder Axis	FL	1
(0022,000A)	Emmetropic Magnification	FL	1
(0022,000B)	Intra Ocular Pressure	FL	1

Tag	Name	VR	VM	
(0022,000C)	Horizontal Field of View	FL	1	
(0022,000D)	Pupil Dilated	CS	1	
(0022,000E)	Degree of Dilation	FL	1	
(0022,0010)	Stereo Baseline Angle	FL	1	
(0022,0011)	Stereo Baseline Displacement	FL	1	
(0022,0012)	Stereo Horizontal Pixel Offset	FL	1	
(0022,0013)	Stereo Vertical Pixel Offset	FL	1	
(0022,0014)	Stereo Rotation	FL	1	
(0022,0015)	Acquisition Device Type Code Sequence	SQ	1	
(0022,0016)	Illumination Type Code Sequence	SQ	1	
(0022,0017)	Light Path Filter Type Stack Code Sequence	SQ	1	
(0022,0018)	Image Path Filter Type Stack Code Sequence	SQ	1	
(0022,0019)	Lenses Code Sequence	SQ	1	
(0022,001A)	Channel Description Code Sequence	SQ	1	
(0022,001B)	Refractive State Sequence	SQ	1	
(0022,001C)	Mydriatic Agent Code Sequence	SQ	1	
(0022,001D)	Relative Image Position Code Sequence	SQ	1	
(0022,0020)	Stereo Pairs Sequence	SQ	1	
(0022,0021)	Left Image Sequence	SQ	1	
(0022,0022)	Right Image Sequence	SQ	1	

Tag	Name	VR	VM	
(0028,0002)	Samples per Pixel	US	1	
(0028,0003)	Samples per Pixel Used	US	1	
(0028,0004)	Photometric Interpretation	CS	1	
(0028,0005)	*Image Dimensions*			*RET*
(0028,0006)	Planar Configuration	US	1	
(0028,0008)	Number of Frames	IS	1	
(0028,0009)	Frame Increment Pointer	AT	1-n	
(0028,000A)	Frame Dimension Pointer	AT	1-n	
(0028,0010)	Rows	US	1	

Tag	Name	VR	VM	
(0028,0011)	Columns	US	1	
(0028,0012)	Planes	US	1	
(0028,0014)	Ultrasound Color Data Present	US	1	
(0028,0030)	Pixel Spacing	DS	2	
(0028,0031)	Zoom Factor	DS	2	
(0028,0032)	Zoom Center	DS	2	
(0028,0034)	Pixel Aspect Ratio	IS	2	
(0028,0040)	*Image Format*			*RET*
(0028,0050)	*Manipulated Image*			*RET*
(0028,0051)	Corrected Image	CS	1-n	
(0028,0060)	*Compression Code*			*RET*
(0028,0100)	Bits Allocated	US	1	
(0028,0101)	Bits Stored	US	1	
(0028,0102)	High Bit	US	1	
(0028,0103)	Pixel Representation	US	1	
(0028,0104)	*Smallest Valid Pixel Value*			*RET*
(0028,0105)	*Largest Valid Pixel Value*			*RET*
(0028,0106)	Smallest Image Pixel Value	US or SS	1	
(0028,0107)	Largest Image Pixel Value	US or SS	1	
(0028,0108)	Smallest Pixel Value in Series	US or SS	1	
(0028,0109)	Largest Pixel Value in Series	US or SS	1	
(0028,0110)	Smallest Image Pixel Value in Plane	US or SS	1	
(0028,0111)	Largest Image Pixel Value in Plane	US or SS	1	
(0028,0120)	Pixel Padding Value	US or SS	1	
(0028,0200)	*Image Location*			*RET*
(0028,0300)	Quality Control Image	CS	1	
(0028,0301)	Burned In Annotation	CS	1	
(0028,1040)	Pixel Intensity Relationship	CS	1	
(0028,1041)	Pixel Intensity Relationship Sign	SS	1	
(0028,1050)	Window Center	DS	1-n	
(0028,1051)	Window Width	DS	1-n	

Tag	Name	VR	VM	
(0028,1052)	Rescale Intercept	DS	1	
(0028,1053)	Rescale Slope	DS	1	
(0028,1054)	Rescale Type	LO	1	
(0028,1055)	Window Center & Width Explanation	LO	1-n	
(0028,1080)	*Gray Scale*			*RET*
(0028,1090)	Recommended Viewing Mode	CS	1	
(0028,1100)	*Gray Lookup Table Descriptor*			*RET*
(0028,1101)	Red Palette Color Lookup Table Descriptor	US or SS	3	
(0028,1102)	Green Palette Color Lookup Table Descriptor	US or SS	3	
(0028,1103)	Blue Palette Color Lookup Table Descriptor	US or SS	3	
(0028,1199)	Palette Color Lookup Table UID	UI	1	
(0028,1200)	*Gray Lookup Table Data*			*RET*
(0028,1201)	Red Palette Color Lookup Table Data	OW	1	
(0028,1202)	Green Palette Color Lookup Table Data	OW	1	
(0028,1203)	Blue Palette Color Lookup Table Data	OW	1	
(0028,1221)	Segmented Red Palette Color Lookup Table Data	OW	1	
(0028,1222)	Segmented Green Palette Color Lookup Table Data	OW	1	
(0028,1223)	Segmented Blue Palette Color Lookup Table Data	OW	1	
(0028,1300)	Implant Present	CS	1	
(0028,1350)	Partial View	CS	1	
(0028,1351)	Partial View Description	ST	1	
(0028,2110)	Lossy Image Compression	CS	1	
(0028,2112)	Lossy Image Compression Ratio	DS	1-n	
(0028,2114)	Lossy Image Compression Method	CS	1-n	
(0028,3000)	Modality LUT Sequence	SQ	1	
(0028,3002)	LUT Descriptor	US or SS	3	
(0028,3003)	LUT Explanation	LO	1	
(0028,3004)	Modality LUT Type	LO	1	
(0028,3006)	LUT Data	US or SS or OW	1-n 1	
(0028,3010)	VOI LUT Sequence	SQ	1	
(0028,3110)	Softcopy VOI LUT Sequence	SQ	1	

Tag	Name	VR	VM	
(0028,4000)	*Comments*			*RET*
(0028,5000)	Bi-Plane Acquisition Sequence	SQ	1	
(0028,6010)	Representative Frame Number	US	1	
(0028,6020)	Frame Numbers of Interest (FOI)	US	1-n	
(0028,6022)	Frame(s) of Interest Description	LO	1-n	
(0028,6023)	Frame of Interest Type	CS	1-n	
(0028,6030)	*Mask Pointer(s)*	*US*	*1-n*	*RET*
(0028,6040)	R Wave Pointer	US	1-n	
(0028,6100)	Mask Subtraction Sequence	SQ	1	
(0028,6101)	Mask Operation	CS	1	
(0028,6102)	Applicable Frame Range	US	2-2n	
(0028,6110)	Mask Frame Numbers	US	1-n	
(0028,6112)	Contrast Frame Averaging	US	1	
(0028,6114)	Mask Sub-pixel Shift	FL	2	
(0028,6120)	TID Offset	SS	1	
(0028,6190)	Mask Operation Explanation	ST	1	
(0028,9001)	Data Point Rows	UL	1	
(0028,9002)	Data Point Columns	UL	1	
(0028,9003)	Signal Domain Columns	CS	1	
(0028,9099)	*Largest Monochrome Pixel Value*	*US*	*1*	*Retired*
(0028,9108)	Data Representation	CS	1	
(0028,9110)	Pixel Measures Sequence	SQ	1	
(0028,9132)	Frame VOI LUT Sequence	SQ	1	
(0028,9145)	Pixel Value Transformation Sequence	SQ	1	
(0028,9235)	Signal Domain Rows	CS	1	

Tag	Name	VR	VM
(0032,000A)	Study Status ID	CS	1
(0032,000C)	Study Priority ID	CS	1
(0032,0012)	Study ID Issuer	LO	1
(0032,0032)	Study Verified Date	DA	1

Tag	Name	VR	VM
(0032,0033)	Study Verified Time	TM	1
(0032,0034)	Study Read Date	DA	1
(0032,0035)	Study Read Time	TM	1
(0032,1000)	Scheduled Study Start Date	DA	1
(0032,1001)	Scheduled Study Start Time	TM	1
(0032,1010)	Scheduled Study Stop Date	DA	1
(0032,1011)	Scheduled Study Stop Time	TM	1
(0032,1020)	Scheduled Study Location	LO	1
(0032,1021)	Scheduled Study Location AE Title(s)	AE	1-n
(0032,1030)	Reason for Study	LO	1
(0032,1031)	Requesting Physician Identification Sequence	SQ	1
(0032,1032)	Requesting Physician	PN	1
(0032,1033)	Requesting Service	LO	1
(0032,1040)	Study Arrival Date	DA	1
(0032,1041)	Study Arrival Time	TM	1
(0032,1050)	Study Completion Date	DA	1
(0032,1051)	Study Completion Time	TM	1
(0032,1055)	Study Component Status ID	CS	1
(0032,1060)	Requested Procedure Description	LO	1
(0032,1064)	Requested Procedure Code Sequence	SQ	1
(0032,1070)	Requested Contrast Agent	LO	1
(0032,4000)	Study Comments	LT	1

Tag	Name	VR	VM
(0038,0004)	Referenced Patient Alias Sequence	SQ	1
(0038,0008)	Visit Status ID	CS	1
(0038,0010)	Admission ID	LO	1
(0038,0011)	Issuer of Admission ID	LO	1
(0038,0016)	Route of Admissions	LO	1
(0038,001A)	Scheduled Admission Date	DA	1
(0038,001B)	Scheduled Admission Time	TM	1

Tag	Name	VR	VM
(0038,001C)	Scheduled Discharge Date	DA	1
(0038,001D)	Scheduled Discharge Time	TM	1
(0038,001E)	Scheduled Patient Institution Residence	LO	1
(0038,0020)	Admitting Date	DA	1
(0038,0021)	Admitting Time	TM	1
(0038,0030)	Discharge Date	DA	1
(0038,0032)	Discharge Time	TM	1
(0038,0040)	Discharge Diagnosis Description	LO	1
(0038,0044)	Discharge Diagnosis Code Sequence	SQ	1
(0038,0050)	Special Needs	LO	1
(0038,0300)	Current Patient Location	LO	1
(0038,0400)	Patient's Institution Residence	LO	1
(0038,0500)	Patient State	LO	1
(0038,4000)	Visit Comments	LT	1

Tag	Name	VR	VM
(003A,0004)	Waveform Originality	CS	1
(003A,0005)	Number of Waveform Channels	US	1
(003A,0010)	Number of Waveform Samples	UL	1
(003A,001A)	Sampling Frequency	DS	1
(003A,0020)	Multiplex Group Label	SH	1
(003A,0200)	Channel Definition Sequence	SQ	1
(003A,0202)	Waveform Channel Number	IS	1
(003A,0203)	Channel Label	SH	1
(003A,0205)	Channel Status	CS	1-n
(003A,0208)	Channel Source Sequence	SQ	1
(003A,0209)	Channel Source Modifiers Sequence	SQ	1
(003A,020A)	Source Waveform Sequence	SQ	1
(003A,020C)	Channel Derivation Description	LO	1
(003A,0210)	Channel Sensitivity	DS	1
(003A,0211)	Channel Sensitivity Units Sequence	SQ	1

Tag	Name	VR	VM
(003A,0212)	Channel Sensitivity Correction Factor	DS	1
(003A,0213)	Channel Baseline	DS	1
(003A,0214)	Channel Time Skew	DS	1
(003A,0215)	Channel Sample Skew	DS	1
(003A,0218)	Channel Offset	DS	1
(003A,021A)	Waveform Bits Stored	US	1
(003A,0220)	Filter Low Frequency	DS	1
(003A,0221)	Filter High Frequency	DS	1
(003A,0222)	Notch Filter Frequency	DS	1
(003A,0223)	Notch Filter Bandwidth	DS	1
(003A,0300)	Multiplexed Audio Channels Description Code Sequence	SQ	1
(003A,0301)	Channel Identification Code	IS	1
(003A,0302)	Channel Mode	CS	1

Tag	Name	VR	VM
(0040,0001)	Scheduled Station AE Title	AE	1-n
(0040,0002)	Scheduled Procedure Step Start Date	DA	1
(0040,0003)	Scheduled Procedure Step Start Time	TM	1
(0040,0004)	Scheduled Procedure Step End Date	DA	1
(0040,0005)	Scheduled Procedure Step End Time	TM	1
(0040,0006)	Scheduled Performing Physician’s Name	PN	1
(0040,0007)	Scheduled Procedure Step Description	LO	1
(0040,0008)	Scheduled Protocol Code Sequence	SQ	1
(0040,0009)	Scheduled Procedure Step ID	SH	1
(0040,000A)	Stage Code Sequence	SQ	1
(0040,000B)	Scheduled Performing Physician Identification Sequence	SQ	1
(0040,0010)	Scheduled Station Name	SH	1-n
(0040,0011)	Scheduled Procedure Step Location	SH	1
(0040,0012)	Pre-Medication	LO	1
(0040,0020)	Scheduled Procedure Step Status	CS	1
(0040,0100)	Scheduled Procedure Step Sequence	SQ	1

Tag	Name	VR	VM	
(0040,0220)	Referenced Non-Image Composite SOP Instance Sequence	SQ	1	
(0040,0241)	Performed Station AE Title	AE	1	
(0040,0242)	Performed Station Name	SH	1	
(0040,0243)	Performed Location	SH	1	
(0040,0244)	Performed Procedure Step Start Date	DA	1	
(0040,0245)	Performed Procedure Step Start Time	TM	1	
(0040,0250)	Performed Procedure Step End Date	DA	1	
(0040,0251)	Performed Procedure Step End Time	TM	1	
(0040,0252)	Performed Procedure Step Status	CS	1	
(0040,0253)	Performed Procedure Step ID	SH	1	
(0040,0254)	Performed Procedure Step Description	LO	1	
(0040,0255)	Performed Procedure Type Description	LO	1	
(0040,0260)	Performed Protocol Code Sequence	SQ	1	
(0040,0270)	Scheduled Step Attributes Sequence	SQ	1	
(0040,0275)	Request Attributes Sequence	SQ	1	
(0040,0280)	Comments on the Performed Procedure Step	ST	1	
(0040,0281)	Performed Procedure Step Discontinuation Reason Code Sequence	SQ	1	
(0040,0293)	Quantity Sequence	SQ	1	
(0040,0294)	Quantity	DS	1	
(0040,0295)	Measuring Units Sequence	SQ	1	
(0040,0296)	Billing Item Sequence	SQ	1	
(0040,0300)	Total Time of Fluoroscopy	US	1	
(0040,0301)	Total Number of Exposures	US	1	
(0040,0302)	Entrance Dose	US	1	
(0040,0303)	Exposed Area	US	1-2	
(0040,0306)	Distance Source to Entrance	DS	1	
(0040,0307)	*Distance Source to Support*	*DS*	*1*	*RET*
(0040,030E)	Exposure Dose Sequence	SQ	1	
(0040,0310)	Comments on Radiation Dose	ST	1	
(0040,0312)	X-Ray Output	DS	1	

Tag	Name	VR	VM	
(0040,0314)	Half Value Layer	DS	1	
(0040,0316)	Organ Dose	DS	1	
(0040,0318)	Organ Exposed	CS	1	
(0040,0320)	Billing Procedure Step Sequence	SQ	1	
(0040,0321)	Film Consumption Sequence	SQ	1	
(0040,0324)	Billing Supplies and Devices Sequence	SQ	1	
(0040,0330)	*Referenced Procedure Step Sequence*	*SQ*	*1*	*RET*
(0040,0340)	Performed Series Sequence	SQ	1	
(0040,0400)	Comments on the Scheduled Procedure Step	LT	1	
(0040,0440)	Protocol Context Sequence	SQ	1	
(0040,0441)	Content Item Modifier Sequence	SQ	1	
(0040,050A)	Specimen Accession Number	LO	1	
(0040,0550)	Specimen Sequence	SQ	1	
(0040,0551)	Specimen Identifier	LO	1	
(0040,0555)	Acquisition Context Sequence	SQ	1	
(0040,0556)	Acquisition Context Description	ST	1	
(0040,059A)	Specimen Type Code Sequence	SQ	1	
(0040,06FA)	Slide Identifier	LO	1	
(0040,071A)	Image Center Point Coordinates Sequence	SQ	1	
(0040,072A)	X offset in Slide Coordinate System	DS	1	
(0040,073A)	Y offset in Slide Coordinate System	DS	1	
(0040,074A)	Z offset in Slide Coordinate System	DS	1	
(0040,08D8)	Pixel Spacing Sequence	SQ	1	
(0040,08DA)	Coordinate System Axis Code Sequence	SQ	1	
(0040,08EA)	Measurement Units Code Sequence	SQ	1	
(0040,1001)	Requested Procedure ID	SH	1	
(0040,1002)	Reason for the Requested Procedure	LO	1	
(0040,1003)	Requested Procedure Priority	SH	1	
(0040,1004)	Patient Transport Arrangements	LO	1	
(0040,1005)	Requested Procedure Location	LO	1	
(0040,1006)	*Placer Order Number / Procedure*	*SH*	*1*	*RET*
(0040,1007)	*Filler Order Number / Procedure*	*SH*	*1*	*RET*

Tag	Name	VR	VM	
(0040,1008)	Confidentiality Code	LO	1	
(0040,1009)	Reporting Priority	SH	1	
(0040,100A)	Reason for Requested Procedure Code Sequence	SQ	1	
(0040,1010)	Names of Intended Recipients of Results	PN	1-n	
(0040,1011)	Intended Recipients of Results Identification Sequence	SQ	1	
(0040,1101)	Person Identification Code Sequence	SQ	1	
(0040,1102)	Person's Address	ST	1	
(0040,1103)	Person's Telephone Numbers	LO	1-n	
(0040,1400)	Requested Procedure Comments	LT	1	
(0040,2001)	*Reason for the Imaging Service Request*	*LO*	*1*	*RET*
(0040,2004)	Issue Date of Imaging Service Request	DA	1	
(0040,2005)	Issue Time of Imaging Service Request	TM	1	
(0040,2006)	*Placer Order Number / Imaging Service Request*	*SH*	*1*	*RET*
(0040,2007)	*Filler Order Number / Imaging Service Request*	*SH*	*1*	*RET*
(0040,2008)	Order Entered By	PN	1	
(0040,2009)	Order Enterer's Location	SH	1	
(0040,2010)	Order Callback Phone Number	SH	1	
(0040,2016)	Placer Order Number / Imaging Service Request	LO	1	
(0040,2017)	Filler Order Number / Imaging Service Request	LO	1	
(0040,2400)	Imaging Service Request Comments	LT	1	
(0040,3001)	Confidentiality Constraint on Patient Data Description	LO	1	
(0040,4001)	General Purpose Scheduled Procedure Step Status	CS	1	
(0040,4002)	General Purpose Performed Procedure Step Status	CS	1	
(0040,4003)	General Purpose Scheduled Procedure Step Priority	CS	1	
(0040,4004)	Scheduled Processing Applications Code Sequence	SQ	1	
(0040,4005)	Scheduled Procedure Step Start Date and Time	DT	1	
(0040,4006)	Multiple Copies Flag	CS	1	
(0040,4007)	Performed Processing Applications Code Sequence	SQ	1	
(0040,4009)	Human Performer Code Sequence	SQ	1	
(0040,4010)	Scheduled Procedure Step Modification Date and Time	DT	1	
(0040,4011)	Expected Completion Date and Time	DT	1	

Tag	Name	VR	VM
(0040,4015)	Resulting General Purpose Performed Procedure Steps Sequence	SQ	1
(0040,4016)	Referenced General Purpose Scheduled Procedure Step Sequence	SQ	1
(0040,4018)	Scheduled Workitem Code Sequence	SQ	1
(0040,4019)	Performed Workitem Code Sequence	SQ	1
(0040,4020)	Input Availability Flag	CS	1
(0040,4021)	Input InformationSequence	SQ	1
(0040,4022)	Relevant Information Sequence	SQ	1
(0040,4023)	Referenced General Purpose Scheduled Procedure Step Transaction UID	UI	1
(0040,4025)	Scheduled Station Name Code Sequence	SQ	1
(0040,4026)	Scheduled Station Class Code Sequence	SQ	1
(0040,4027)	Scheduled Station Geographic Location Code Sequence	SQ	1
(0040,4028)	Performed Station Name Code Sequence	SQ	1
(0040,4029)	Performed Station Class Code Sequence	SQ	1
(0040,4030)	Performed Station Geographic Location Code Sequence	SQ	1
(0040,4031)	Requested Subsequent Workitem Code Sequence	SQ	1
(0040,4032)	Non-DICOM Output Code Sequence	SQ	1
(0040,4033)	Output Information Sequence	SQ	1
(0040,4034)	Scheduled Human Performers Sequence	SQ	1
(0040,4035)	Actual Human Performers Sequence	SQ	1
(0040,4036)	Human Performer’s Organization	LO	1
(0040,4037)	Human Performer’s Name	PN	1
(0040,8302)	Entrance Dose in mGy	DS	1
(0040,9096)	Real World Value Mapping Sequence	SQ	1
(0040,9210)	LUT Label	SH	1
(0040,9211)	Real World Value Last Value Mapped	US/SS	1
(0040,9212)	Real World Value LUT Data	FD	1-n
(0040,9216)	Real World Value First Value Mapped	US/SS	1
(0040,9224)	Real World Value Intercept	FD	1
(0040,9225)	Real World Value Slope	FD	1
(0040,A010)	Relationship Type	CS	1

Tag	Name	VR	VM
(0040,A027)	Verifying Organization	LO	1
(0040,A030)	Verification DateTime	DT	1
(0040,A032)	Observation DateTime	DT	1
(0040,A040)	Value Type	CS	1
(0040,A043)	Concept Name Code Sequence	SQ	1
(0040,A050)	Continuity Of Content	CS	1
(0040,A073)	Verifying Observer Sequence	SQ	1
(0040,A075)	Verifying Observer Name	PN	1
(0040,A088)	Verifying Observer Identification Code Sequence	SQ	1
(0040,A0B0)	Referenced Waveform Channels	US	2-2n
(0040,A120)	DateTime	DT	1
(0040,A121)	Date	DA	1
(0040,A122)	Time	TM	1
(0040,A123)	Person Name	PN	1
(0040,A124)	UID	UI	1
(0040,A130)	Temporal Range Type	CS	1
(0040,A132)	Referenced Sample Positions	UL	1-n
(0040,A136)	Referenced Frame Numbers	US	1-n
(0040,A138)	Referenced Time Offsets	DS	1-n
(0040,A13A)	Referenced Datetime	DT	1-n
(0040,A160)	Text Value	UT	1
(0040,A168)	Concept Code Sequence	SQ	1
(0040,A170)	Purpose of Reference Code Sequence	SQ	1
(0040,A180)	Annotation Group Number	US	1
(0040,A195)	Modifier Code Sequence	SQ	1
(0040,A300)	Measured Value Sequence	SQ	1
(0040,A301)	Numeric Value Qualifier Code Sequence	SQ	1
(0040,A30A)	Numeric Value	DS	1-n
(0040,A360)	Predecessor Documents Sequence	SQ	1
(0040,A370)	Referenced Request Sequence	SQ	1
(0040,A372)	Performed Procedure Code Sequence	SQ	1

Tag	Name	VR	VM	
(0040,A375)	Current Requested Procedure Evidence Sequence	SQ	1	
(0040,A385)	Pertinent Other Evidence Sequence	SQ	1	
(0040,A491)	Completion Flag	CS	1	
(0040,A492)	Completion Flag Description	LO	1	
(0040,A493)	Verification Flag	CS	1	
(0040,A504)	Content Template Sequence	SQ	1	
(0040,A525)	Identical Documents Sequence	SQ	1	
(0040,A730)	Content Sequence	SQ	1	
(0040,B020)	Annotation Sequence	SQ	1	
(0040,DB00)	Template Identifier	CS	1	
(0040,DB06)	*Template Version*	*DT*	*1*	*RET*
(0040,DB07)	*Template Local Version*	*DT*	*1*	*RET*
(0040,DB0B)	*Template Extension Flag*	*CS*	*1*	*RET*
(0040,DB0C)	*Template Extension Organization UID*	*UI*	*1*	*RET*
(0040,DB0D)	*Template Extension Creator UID*	*UI*	*1*	*RET*
(0040,DB73)	Referenced Content Item Identifier	UL	1-n	

Tag	Name	VR	VM
(0050,0004)	Calibration Image	CS	1
(0050,0010)	Device Sequence	SQ	1
(0050,0014)	Device Length	DS	1
(0050,0016)	Device Diameter	DS	1
(0050,0017)	Device Diameter Units	CS	1
(0050,0018)	Device Volume	DS	1
(0050,0019)	Inter-marker Distance	DS	1
(0050,0020)	Device Description	LO	1

Tag	Name	VR	VM
(0054,0010)	Energy Window Vector	US	1-n

Tag	Name	VR	VM
(0054,0011)	Number of Energy Windows	US	1
(0054,0012)	Energy Window Information Sequence	SQ	1
(0054,0013)	Energy Window Range Sequence	SQ	1
(0054,0014)	Energy Window Lower Limit	DS	1
(0054,0015)	Energy Window Upper Limit	DS	1
(0054,0016)	Radiopharmaceutical Information Sequence	SQ	1
(0054,0017)	Residual Syringe Counts	IS	1
(0054,0018)	Energy Window Name	SH	1
(0054,0020)	Detector Vector	US	1-n
(0054,0021)	Number of Detectors	US	1
(0054,0022)	Detector Information Sequence	SQ	1
(0054,0030)	Phase Vector	US	1-n
(0054,0031)	Number of Phases	US	1
(0054,0032)	Phase Information Sequence	SQ	1
(0054,0033)	Number of Frames in Phase	US	1
(0054,0036)	Phase Delay	IS	1
(0054,0038)	Pause Between Frames	IS	1
(0054,0039)	Phase Description	CS	1
(0054,0050)	Rotation Vector	US	1-n
(0054,0051)	Number of Rotations	US	1
(0054,0052)	Rotation Information Sequence	SQ	1
(0054,0053)	Number of Frames in Rotation	US	1
(0054,0060)	R-R Interval Vector	US	1-n
(0054,0061)	Number of R-R Intervals	US	1
(0054,0062)	Gated Information Sequence	SQ	1
(0054,0063)	Data Information Sequence	SQ	1
(0054,0070)	Time Slot Vector	US	1-n
(0054,0071)	Number of Time Slots	US	1
(0054,0072)	Time Slot Information Sequence	SQ	1
(0054,0073)	Time Slot Time	DS	1
(0054,0080)	Slice Vector	US	1-n

Tag	Name	VR	VM
(0054,0081)	Number of Slices	US	1
(0054,0090)	Angular View Vector	US	1-n
(0054,0100)	Time Slice Vector	US	1-n
(0054,0101)	Number of Time Slices	US	1
(0054,0200)	Start Angle	DS	1
(0054,0202)	Type of Detector Motion	CS	1
(0054,0210)	Trigger Vector	IS	1-n
(0054,0211)	Number of Triggers in Phase	US	1
(0054,0220)	View Code Sequence	SQ	1
(0054,0222)	View Modifier Code Sequence	SQ	1
(0054,0300)	Radionuclide Code Sequence	SQ	1
(0054,0302)	Administration Route Code Sequence	SQ	1
(0054,0304)	Radiopharmaceutical Code Sequence	SQ	1
(0054,0306)	Calibration Data Sequence	SQ	1
(0054,0308)	Energy Window Number	US	1
(0054,0400)	Image ID	SH	1
(0054,0410)	Patient Orientation Code Sequence	SQ	1
(0054,0412)	Patient Orientation Modifier Code Sequence	SQ	1
(0054,0414)	Patient Gantry Relationship Code Sequence	SQ	1
(0054,0500)	Slice Progression Direction	CS	1
(0054,1000)	Series Type	CS	2
(0054,1001)	Units	CS	1
(0054,1002)	Counts Source	CS	1
(0054,1004)	Reprojection Method	CS	1
(0054,1100)	Randoms Correction Method	CS	1
(0054,1101)	Attenuation Correction Method	LO	1
(0054,1102)	Decay Correction	CS	1
(0054,1103)	Reconstruction Method	LO	1
(0054,1104)	Detector Lines of Response Used	LO	1
(0054,1105)	Scatter Correction Method	LO	1
(0054,1200)	Axial Acceptance	DS	1
(0054,1201)	Axial Mash	IS	2

Tag	Name	VR	VM
(0054,1202)	Transverse Mash	IS	1
(0054,1203)	Detector Element Size	DS	2
(0054,1210)	Coincidence Window Width	DS	1
(0054,1220)	Secondary Counts Type	CS	1-n
(0054,1300)	Frame Reference Time	DS	1
(0054,1310)	Primary (Prompts) Counts Accumulated	IS	1
(0054,1311)	Secondary Counts Accumulated	IS	1-n
(0054,1320)	Slice Sensitivity Factor	DS	1
(0054,1321)	Decay Factor	DS	1
(0054,1322)	Dose Calibration Factor	DS	1
(0054,1323)	Scatter Fraction Factor	DS	1
(0054,1324)	Dead Time Factor	DS	1
(0054,1330)	Image Index	US	1
(0054,1400)	Counts Included	CS	1-n
(0054,1401)	Dead Time Correction Flag	CS	1

Tag	Name	VR	VM
(0060,3000)	Histogram Sequence	SQ	1
(0060,3002)	Histogram Number of Bins	US	1
(0060,3004)	Histogram First Bin Value	US or SS	1
(0060,3006)	Histogram Last Bin Value	US or SS	1
(0060,3008)	Histogram Bin Width	US	1
(0060,3010)	Histogram Explanation	LO	1
(0060,3020)	Histogram Data	UL	1-n

Tag	Name	VR	VM
(0070,0001)	Graphic Annotation Sequence	SQ	1
(0070,0002)	Graphic Layer	CS	1
(0070,0003)	Bounding Box Annotation Units	CS	1
(0070,0004)	Anchor Point Annotation Units	CS	1

Tag	Name	VR	VM
(0070,0005)	Graphic Annotation Units	CS	1
(0070,0006)	Unformatted Text Value	ST	1
(0070,0008)	Text Object Sequence	SQ	1
(0070,0009)	Graphic Object Sequence	SQ	1
(0070,0010)	Bounding Box Top Left Hand Corner	FL	2
(0070,0011)	Bounding Box Bottom Right Hand Corner	FL	2
(0070,0012)	Bounding Box Text Horizontal Justification	CS	1
(0070,0014)	Anchor Point	FL	2
(0070,0015)	Anchor Point Visibility	CS	1
(0070,0020)	Graphic Dimensions	US	1
(0070,0021)	Number of Graphic Points	US	1
(0070,0022)	Graphic Data	FL	2-n
(0070,0023)	Graphic Type	CS	1
(0070,0024)	Graphic Filled	CS	1
(0070,0041)	Image Horizontal Flip	CS	1
(0070,0042)	Image Rotation	US	1
(0070,0052)	Displayed Area Top Left Hand Corner	SL	2
(0070,0053)	Displayed Area Bottom Right Hand Corner	SL	2
(0070,005A)	Displayed Area Selection Sequence	SQ	1
(0070,0060)	Graphic Layer Sequence	SQ	1
(0070,0062)	Graphic Layer Order	IS	1
(0070,0066)	Graphic Layer Recommended Display Grayscale Value	US	1
(0070,0067)	Graphic Layer Recommended Display RGB Value	US	3
(0070,0068)	Graphic Layer Description	LO	1
(0070,0080)	Content Label	CS	1
(0070,0081)	Content Description	LO	1
(0070,0082)	Presentation Creation Date	DA	1
(0070,0083)	Presentation Creation Time	TM	1
(0070,0084)	Content Creator’s Name	PN	1
(0070,0100)	Presentation Size Mode	CS	1
(0070,0101)	Presentation Pixel Spacing	DS	2
(0070,0102)	Presentation Pixel Aspect Ratio	IS	2

Tag	Name	VR	VM
(0070,0103)	Presentation Pixel Magnification Ratio	FL	1
(0070,0306)	Shape Type	CS	1
(0070,0308)	Registration Sequence	SQ	1
(0070,0309)	Matrix Registration Sequence	SQ	1
(0070,030A)	Matrix Sequence	SQ	1
(0070,030C)	Frame of Reference Transformation Matrix Type	CS	1
(0070,030D)	Registration Type Code Sequence	SQ	1
(0070,030F)	Fiducial Description	ST	1
(0070,0310)	Fiducial Identifier	SH	1
(0070,0311)	Fiducial Identifier Code Sequence	SQ	1
(0070,0312)	Contour Uncertainty Radius	FD	1
(0070,0314)	Used Fiducials Sequence	SQ	1
(0070,0318)	Graphic Coordinates Data Sequence	SQ	1
(0070,031A)	Fiducial UID	UI	1
(0070,031C)	Fiducial Set Sequence	SQ	1
(0070,031E)	Fiducial Sequence	SQ	1

Tag	Name	VR	VM
(0088,0130)	Storage Media File-set ID	SH	1
(0088,0140)	Storage Media File-set UID	UI	1
(0088,0200)	Icon Image Sequence	SQ	1
(0088,0904)	Topic Title	LO	1
(0088,0906)	Topic Subject	ST	1
(0088,0910)	Topic Author	LO	1
(0088,0912)	Topic Key Words	LO	1-32

Tag	Name	VR	VM
(0100,0410)	SOP Instance Status	CS	1
(0100,0420)	SOP Authorization Date and Time	DT	1

Tag	Name	VR	VM
(0100,0424)	SOP Authorization Comment	LT	1
(0100,0426)	Authorization Equipment Certification Number	LO	1

Tag	Name	VR	VM
(0400,0005)	MAC ID Number	US	1
(0400,0010)	MAC Calculation Transfer Syntax UID	UI	1
(0400,0015)	MAC Algorithm	CS	1
(0400,0020)	Data Elements Signed	AT	1-n
(0400,0100)	Digital Signature UID	UI	1
(0400,0105)	Digital Signature DateTime	DT	1
(0400,0110)	Certificate Type	CS	1
(0400,0115)	Certificate of Signer	OB	1
(0400,0120)	Signature	OB	1
(0400,0305)	Certified Timestamp Type	CS	1
(0400,0310)	Certified Timestamp	OB	1
(0400,0500)	Encrypted Attributes Sequence	SQ	1
(0400,0510)	Encrypted Content Transfer Syntax UID	UI	1
(0400,0520)	Encrypted Content	OB	1
(0400,0550)	Modified Attributes Sequence	SQ	1

Tag	Name	VR	VM
(2000,0010)	Number of Copies	IS	1
(2000,001E)	Printer Configuration Sequence	SQ	1
(2000,0020)	Print Priority	CS	1
(2000,0030)	Medium Type	CS	1
(2000,0040)	Film Destination	CS	1
(2000,0050)	Film Session Label	LO	1
(2000,0060)	Memory Allocation	IS	1
(2000,0061)	Maximum Memory Allocation	IS	1
(2000,0062)	Color Image Printing Flag	CS	1

Tag	Name	VR	VM
(2000,0063)	Collation Flag	CS	1
(2000,0065)	Annotation Flag	CS	1
(2000,0067)	Image Overlay Flag	CS	1
(2000,0069)	Presentation LUT Flag	CS	1
(2000,006A)	Image Box Presentation LUT Flag	CS	1
(2000,00A0)	Memory Bit Depth	US	1
(2000,00A1)	Printing Bit Depth	US	1
(2000,00A2)	Media Installed Sequence	SQ	1
(2000,00A4)	Other Media Available Sequence	SQ	1
(2000,00A8)	Supported Image Display Formats Sequence	SQ	1
(2000,0500)	Referenced Film Box Sequence	SQ	1
(2000,0510)	Referenced Stored Print Sequence	SQ	1

Tag	Name	VR	VM
(2010,0010)	Image Display Format	ST	1
(2010,0030)	Annotation Display Format ID	CS	1
(2010,0040)	Film Orientation	CS	1
(2010,0050)	Film Size ID	CS	1
(2010,0052)	Printer Resolution ID	CS	1
(2010,0054)	Default Printer Resolution ID	CS	1
(2010,0060)	Magnification Type	CS	1
(2010,0080)	Smoothing Type	CS	1
(2010,00A6)	Default Magnification Type	CS	1
(2010,00A7)	Other Magnification Types Available	CS	1-n
(2010,00A8)	Default Smoothing Type	CS	1
(2010,00A9)	Other Smoothing Types Available	CS	1-n
(2010,0100)	Border Density	CS	1
(2010,0110)	Empty Image Density	CS	1
(2010,0120)	Min Density	US	1
(2010,0130)	Max Density	US	1

Tag	Name	VR	VM	
(2010,0140)	Trim	CS	1	
(2010,0150)	Configuration Information	ST	1	
(2010,0152)	Configuration Information Description	LT	1	
(2010,0154)	Maximum Collated Films	IS	1	
(2010,015E)	Illumination	US	1	
(2010,0160)	Reflected Ambient Light	US	1	
(2010,0376)	Printer Pixel Spacing	DS	2	
(2010,0500)	Referenced Film Session Sequence	SQ	1	
(2010,0510)	Referenced Image Box Sequence	SQ	1	
(2010,0520)	Referenced Basic Annotation Box Sequence	SQ	1	

Tag	Name	VR	VM	
(2020,0010)	Image Position	US	1	
(2020,0020)	Polarity	CS	1	
(2020,0030)	Requested Image Size	DS	1	
(2020,0040)	Requested Decimate/Crop Behavior	CS	1	
(2020,0050)	Requested Resolution ID	CS	1	
(2020,00A0)	Requested Image Size Flag	CS	1	
(2020,00A2)	Decimate/Crop Result	CS	1	
(2020,0110)	Basic Grayscale Image Sequence	SQ	1	
(2020,0111)	Basic Color Image Sequence	SQ	1	
(2020,0130)	*Referenced Image Overlay Box Sequence*	*SQ*	*1*	*RET*
(2020,0140)	*Referenced VOI LUT Box Sequence*	*SQ*	*1*	*RET*

Tag	Name	VR	VM
(2030,0010)	Annotation Position	US	1
(2030,0020)	Text String	LO	1

Tag	Name	VR	VM

Tag	Name	VR	VM	
(2040,0010)	Referenced Overlay Plane Sequence	SQ	1	
(2040,0011)	Referenced Overlay Plane Groups	US	1-99	
(2040,0020)	Overlay Pixel Data Sequence	SQ	1	
(2040,0060)	Overlay Magnification Type	CS	1	
(2040,0070)	Overlay Smoothing Type	CS	1	
(2040,0072)	Overlay or Image Magnification	CS	1	
(2040,0074)	Magnify to Number of Columns	US	1	
(2040,0080)	Overlay Foreground Density	CS	1	
(2040,0082)	Overlay Background Density	CS	1	
(2040,0090)	*Overlay Mode*	*CS*	*1*	*RET*
(2040,0100)	*Threshold Density*	*CS*	*1*	*RET*
(2040,0500)	*Referenced Image Box Sequence*	*SQ*	*1*	*RET*

Tag	Name	VR	VM
(2050,0010)	Presentation LUT Sequence	SQ	1
(2050,0020)	Presentation LUT Shape	CS	1
(2050,0500)	Referenced Presentation LUT Sequence	SQ	1

Tag	Name	VR	VM
(2100,0010)	Print Job ID	SH	1
(2100,0020)	Execution Status	CS	1
(2100,0030)	Execution Status Info	CS	1
(2100,0040)	Creation Date	DA	1
(2100,0050)	Creation Time	TM	1
(2100,0070)	Originator	AE	1
(2100,0140)	Destination AE	AE	1
(2100,0160)	Owner ID	SH	1
(2100,0170)	Number of Films	IS	1

Tag	Name	VR	VM
(2100,0500)	Referenced Print Job Sequence	SQ	1

Tag	Name	VR	VM
(2110,0010)	Printer Status	CS	1
(2110,0020)	Printer Status Info	CS	1
(2110,0030)	Printer Name	LO	1
(2110,0099)	Print Queue ID	SH	1

Tag	Name	VR	VM
(2120,0010)	Queue Status	CS	1
(2120,0050)	Print Job Description Sequence	SQ	1
(2120,0070)	Referenced Print Job Sequence	SQ	1

Tag	Name	VR	VM
(2130,0010)	Print Management Capabilities Sequence	SQ	1
(2130,0015)	Printer Characteristics Sequence	SQ	1
(2130,0030)	Film Box Content Sequence	SQ	1
(2130,0040)	Image Box Content Sequence	SQ	1
(2130,0050)	Annotation Content Sequence	SQ	1
(2130,0060)	Image Overlay Box Content Sequence	SQ	1
(2130,0080)	Presentation LUT Content Sequence	SQ	1
(2130,00A0)	Proposed Study Sequence	SQ	1
(2130,00C0)	Original Image Sequence	SQ	1

Tag	Name	VR	VM
(2200,0001)	Label Using Information Extracted From Instances	CS	1
(2200,0002)	Label Text	UT	1
(2200,0003)	Label Style Selection	CS	1
(2200,0004)	Media Disposition	LT	1

Tag	Name	VR	VM
(2200,0005)	Barcode Value	LT	1
(2200,0006)	Barcode Symbology	CS	1
(2200,0007)	Allow Media Splitting	CS	1
(2200,0008)	Include Non-DICOM Objects	CS	1
(2200,0009)	Include Display Application	CS	1
(2200,000A)	Preserve Composite Instances After Media Creation	CS	1
(2200,000B)	Total Number of Pieces of Media Created	US	1
(2200,000C)	Requested Media Application Profile	LO	1
(2200,000D)	Referenced Storage Media Sequence	SQ	1
(2200,000E)	Failure Attributes	AT	1-n
(2200,000F)	Allow Lossy Compression	CS	1
(2200,0020)	Request Priority	CS	1

Tag	Name	VR	VM
(3002,0002)	RT Image Label	SH	1
(3002,0003)	RT Image Name	LO	1
(3002,0004)	RT Image Description	ST	1
(3002,000A)	Reported Values Origin	CS	1
(3002,000C)	RT Image Plane	CS	1
(3002,000D)	X-Ray Image Receptor Translation	DS	3
(3002,000E)	X-Ray Image Receptor Angle	DS	1
(3002,0010)	RT Image Orientation	DS	6
(3002,0011)	Image Plane Pixel Spacing	DS	2
(3002,0012)	RT Image Position	DS	2
(3002,0020)	Radiation Machine Name	SH	1
(3002,0022)	Radiation Machine SAD	DS	1
(3002,0024)	Radiation Machine SSD	DS	1
(3002,0026)	RT Image SID	DS	1
(3002,0028)	Source to Reference Object Distance	DS	1
(3002,0029)	Fraction Number	IS	1
(3002,0030)	Exposure Sequence	SQ	1

Tag	Name	VR	VM
(3002,0032)	Meterset Exposure	DS	1
(3002,0034)	Diaphragm Position	DS	4
(3002,0040)	Fluence Map Sequence	SQ	1
(3002,0041)	Fluence Data Source	CS	1
(3002,0042)	Fluence Data Scale	DS	1

Tag	Name	VR	VM
(3004,0001)	DVH Type	CS	1
(3004,0002)	Dose Units	CS	1
(3004,0004)	Dose Type	CS	1
(3004,0006)	Dose Comment	LO	1
(3004,0008)	Normalization Point	DS	3
(3004,000A)	Dose Summation Type	CS	1
(3004,000C)	Grid Frame Offset Vector	DS	2-n
(3004,000E)	Dose Grid Scaling	DS	1
(3004,0010)	RT Dose ROI Sequence	SQ	1
(3004,0012)	Dose Value	DS	1
(3004,0014)	Tissue Heterogeneity Correction	CS	1-3
(3004,0040)	DVH Normalization Point	DS	3
(3004,0042)	DVH Normalization Dose Value	DS	1
(3004,0050)	DVH Sequence	SQ	1
(3004,0052)	DVH Dose Scaling	DS	1
(3004,0054)	DVH Volume Units	CS	1
(3004,0056)	DVH Number of Bins	IS	1
(3004,0058)	DVH Data	DS	2-2n
(3004,0060)	DVH Referenced ROI Sequence	SQ	1
(3004,0062)	DVH ROI Contribution Type	CS	1
(3004,0070)	DVH Minimum Dose	DS	1
(3004,0072)	DVH Maximum Dose	DS	1
(3004,0074)	DVH Mean Dose	DS	1

Tag	Name	VR	VM

Tag	Name	VR	VM
(3006,0002)	Structure Set Label	SH	1
(3006,0004)	Structure Set Name	LO	1
(3006,0006)	Structure Set Description	ST	1
(3006,0008)	Structure Set Date	DA	1
(3006,0009)	Structure Set Time	TM	1
(3006,0010)	Referenced Frame of Reference Sequence	SQ	1
(3006,0012)	RT Referenced Study Sequence	SQ	1
(3006,0014)	RT Referenced Series Sequence	SQ	1
(3006,0016)	Contour Image Sequence	SQ	1
(3006,0020)	Structure Set ROI Sequence	SQ	1
(3006,0022)	ROI Number	IS	1
(3006,0024)	Referenced Frame of Reference UID	UI	1
(3006,0026)	ROI Name	LO	1
(3006,0028)	ROI Description	ST	1
(3006,002A)	ROI Display Color	IS	3
(3006,002C)	ROI Volume	DS	1
(3006,0030)	RT Related ROI Sequence	SQ	1
(3006,0033)	RT ROI Relationship	CS	1
(3006,0036)	ROI Generation Algorithm	CS	1
(3006,0038)	ROI Generation Description	LO	1
(3006,0039)	ROI Contour Sequence	SQ	1
(3006,0040)	Contour Sequence	SQ	1
(3006,0042)	Contour Geometric Type	CS	1
(3006,0044)	Contour Slab Thickness	DS	1
(3006,0045)	Contour Offset Vector	DS	3
(3006,0046)	Number of Contour Points	IS	1
(3006,0048)	Contour Number	IS	1
(3006,0049)	Attached Contours	IS	1-n
(3006,0050)	Contour Data	DS	3-3n
(3006,0080)	RT ROI Observations Sequence	SQ	1

Tag	Name	VR	VM
(3006,0082)	Observation Number	IS	1
(3006,0084)	Referenced ROI Number	IS	1
(3006,0085)	ROI Observation Label	SH	1
(3006,0086)	RT ROI Identification Code Sequence	SQ	1
(3006,0088)	ROI Observation Description	ST	1
(3006,00A0)	Related RT ROI Observations Sequence	SQ	1
(3006,00A4)	RT ROI Interpreted Type	CS	1
(3006,00A6)	ROI Interpreter	PN	1
(3006,00B0)	ROI Physical Properties Sequence	SQ	1
(3006,00B2)	ROI Physical Property	CS	1
(3006,00B4)	ROI Physical Property Value	DS	1
(3006,00C0)	Frame of Reference Relationship Sequence	SQ	1
(3006,00C2)	Related Frame of Reference UID	UI	1
(3006,00C4)	Frame of Reference Transformation Type	CS	1
(3006,00C6)	Frame of Reference Transformation Matrix	DS	16
(3006,00C8)	Frame of Reference Transformation Comment	LO	1

Tag	Name	VR	VM
(3008,0010)	Measured Dose Reference Sequence	SQ	1
(3008,0012)	Measured Dose Description	ST	1
(3008,0014)	Measured Dose Type	CS	1
(3008,0016)	Measured Dose Value	DS	1
(3008,0020)	Treatment Session Beam Sequence	SQ	1
(3008,0022)	Current Fraction Number	IS	1
(3008,0024)	Treatment Control Point Date	DA	1
(3008,0025)	Treatment Control Point Time	TM	1
(3008,002A)	Treatment Termination Status	CS	1
(3008,002B)	Treatment Termination Code	SH	1
(3008,002C)	Treatment Verification Status	CS	1
(3008,0030)	Referenced Treatment Record Sequence	SQ	1
(3008,0032)	Specified Primary Meterset	DS	1

Tag	Name	VR	VM
(3008,0033)	Specified Secondary Meterset	DS	1
(3008,0036)	Delivered Primary Meterset	DS	1
(3008,0037)	Delivered Secondary Meterset	DS	1
(3008,003A)	Specified Treatment Time	DS	1
(3008,003B)	Delivered Treatment Time	DS	1
(3008,0040)	Control Point Delivery Sequence	SQ	1
(3008,0042)	Specified Meterset	DS	1
(3008,0044)	Delivered Meterset	DS	1
(3008,0048)	Dose Rate Delivered	DS	1
(3008,0050)	Treatment Summary Calculated Dose Reference Sequence	SQ	1
(3008,0052)	Cumulative Dose to Dose Reference	DS	1
(3008,0054)	First Treatment Date	DA	1
(3008,0056)	Most Recent Treatment Date	DA	1
(3008,005A)	Number of Fractions Delivered	IS	1
(3008,0060)	Override Sequence	SQ	1
(3008,0062)	Override Parameter Pointer	AT	1
(3008,0064)	Measured Dose Reference Number	IS	1
(3008,0066)	Override Reason	ST	1
(3008,0070)	Calculated Dose Reference Sequence	SQ	1
(3008,0072)	Calculated Dose Reference Number	IS	1
(3008,0074)	Calculated Dose Reference Description	ST	1
(3008,0076)	Calculated Dose Reference Dose Value	DS	1
(3008,0078)	Start Meterset	DS	1
(3008,007A)	End Meterset	DS	1
(3008,0080)	Referenced Measured Dose Reference Sequence	SQ	1
(3008,0082)	Referenced Measured Dose Reference Number	IS	1
(3008,0090)	Referenced Calculated Dose Reference Sequence	SQ	1
(3008,0092)	Referenced Calculated Dose Reference Number	IS	1
(3008,00A0)	Beam Limiting Device Leaf Pairs Sequence	SQ	1
(3008,00B0)	Recorded Wedge Sequence	SQ	1

Tag	Name	VR	VM
(3008,00C0)	Recorded Compensator Sequence	SQ	1
(3008,00D0)	Recorded Block Sequence	SQ	1
(3008,00E0)	Treatment Summary Measured Dose Reference Sequence	SQ	1
(3008,0100)	Recorded Source Sequence	SQ	1
(3008,0105)	Source Serial Number	LO	1
(3008,0110)	Treatment Session Application Setup Sequence	SQ	1
(3008,0116)	Application Setup Check	CS	1
(3008,0120)	Recorded Brachy Accessory Device Sequence	SQ	1
(3008,0122)	Referenced Brachy Accessory Device Number	IS	1
(3008,0130)	Recorded Channel Sequence	SQ	1
(3008,0132)	Specified Channel Total Time	DS	1
(3008,0134)	Delivered Channel Total Time	DS	1
(3008,0136)	Specified Number of Pulses	IS	1
(3008,0138)	Delivered Number of Pulses	IS	1
(3008,013A)	Specified Pulse Repetition Interval	DS	1
(3008,013C)	Delivered Pulse Repetition Interval	DS	1
(3008,0140)	Recorded Source Applicator Sequence	SQ	1
(3008,0142)	Referenced Source Applicator Number	IS	1
(3008,0150)	Recorded Channel Shield Sequence	SQ	1
(3008,0152)	Referenced Channel Shield Number	IS	1
(3008,0160)	Brachy Control Point Delivered Sequence	SQ	1
(3008,0162)	Safe Position Exit Date	DA	1
(3008,0164)	Safe Position Exit Time	TM	1
(3008,0166)	Safe Position Return Date	DA	1
(3008,0168)	Safe Position Return Time	TM	1
(3008,0200)	Current Treatment Status	CS	1
(3008,0202)	Treatment Status Comment	ST	1
(3008,0220)	Fraction Group Summary Sequence	SQ	1
(3008,0223)	Referenced Fraction Number	IS	1
(3008,0224)	Fraction Group Type	CS	1
(3008,0230)	Beam Stopper Position	CS	1

Tag	Name	VR	VM
(3008,0240)	Fraction Status Summary Sequence	SQ	1
(3008,0250)	Treatment Date	DA	1
(3008,0251)	Treatment Time	TM	1

Tag	Name	VR	VM
(300A,0002)	RT Plan Label	SH	1
(300A,0003)	RT Plan Name	LO	1
(300A,0004)	RT Plan Description	ST	1
(300A,0006)	RT Plan Date	DA	1
(300A,0007)	RT Plan Time	TM	1
(300A,0009)	Treatment Protocols	LO	1-n
(300A,000A)	Treatment Intent	CS	1
(300A,000B)	Treatment Sites	LO	1-n
(300A,000C)	RT Plan Geometry	CS	1
(300A,000E)	Prescription Description	ST	1
(300A,0010)	Dose Reference Sequence	SQ	1
(300A,0012)	Dose Reference Number	IS	1
(300A,0013)	Dose Reference UID	UI	1
(300A,0014)	Dose Reference Structure Type	CS	1
(300A,0015)	Nominal Beam Energy Unit	CS	1
(300A,0016)	Dose Reference Description	LO	1
(300A,0018)	Dose Reference Point Coordinates	DS	3
(300A,001A)	Nominal Prior Dose	DS	1
(300A,0020)	Dose Reference Type	CS	1
(300A,0021)	Constraint Weight	DS	1
(300A,0022)	Delivery Warning Dose	DS	1
(300A,0023)	Delivery Maximum Dose	DS	1
(300A,0025)	Target Minimum Dose	DS	1
(300A,0026)	Target Prescription Dose	DS	1
(300A,0027)	Target Maximum Dose	DS	1
(300A,0028)	Target Underdose Volume Fraction	DS	1

Tag	Name	VR	VM
(300A,002A)	Organ at Risk Full-volume Dose	DS	1
(300A,002B)	Organ at Risk Limit Dose	DS	1
(300A,002C)	Organ at Risk Maximum Dose	DS	1
(300A,002D)	Organ at Risk Overdose Volume Fraction	DS	1
(300A,0040)	Tolerance Table Sequence	SQ	1
(300A,0042)	Tolerance Table Number	IS	1
(300A,0043)	Tolerance Table Label	SH	1
(300A,0044)	Gantry Angle Tolerance	DS	1
(300A,0046)	Beam Limiting Device Angle Tolerance	DS	1
(300A,0048)	Beam Limiting Device Tolerance Sequence	SQ	1
(300A,004A)	Beam Limiting Device Position Tolerance	DS	1
(300A,004C)	Patient Support Angle Tolerance	DS	1
(300A,004E)	Table Top Eccentric Angle Tolerance	DS	1
(300A,0051)	Table Top Vertical Position Tolerance	DS	1
(300A,0052)	Table Top Longitudinal Position Tolerance	DS	1
(300A,0053)	Table Top Lateral Position Tolerance	DS	1
(300A,0055)	RT Plan Relationship	CS	1
(300A,0070)	Fraction Group Sequence	SQ	1
(300A,0071)	Fraction Group Number	IS	1
(300A,0072)	Fraction Group Description	LO	1
(300A,0078)	Number of Fractions Planned	IS	1
(300A,0079)	Number of Fraction Pattern Digits Per Day	IS	1
(300A,007A)	Repeat Fraction Cycle Length	IS	1
(300A,007B)	Fraction Pattern	LT	1
(300A,0080)	Number of Beams	IS	1
(300A,0082)	Beam Dose Specification Point	DS	3
(300A,0084)	Beam Dose	DS	1
(300A,0086)	Beam Meterset	DS	1
(300A,00A0)	Number of Brachy Application Setups	IS	1
(300A,00A2)	Brachy Application Setup Dose Specification Point	DS	3
(300A,00A4)	Brachy Application Setup Dose	DS	1
(300A,00B0)	Beam Sequence	SQ	1

Tag	Name	VR	VM
(300A,00B2)	Treatment Machine Name	SH	1
(300A,00B3)	Primary Dosimeter Unit	CS	1
(300A,00B4)	Source-Axis Distance	DS	1
(300A,00B6)	Beam Limiting Device Sequence	SQ	1
(300A,00B8)	RT Beam Limiting Device Type	CS	1
(300A,00BA)	Source to Beam Limiting Device Distance	DS	1
(300A,00BC)	Number of Leaf/Jaw Pairs	IS	1
(300A,00BE)	Leaf Position Boundaries	DS	3-n
(300A,00C0)	Beam Number	IS	1
(300A,00C2)	Beam Name	LO	1
(300A,00C3)	Beam Description	ST	1
(300A,00C4)	Beam Type	CS	1
(300A,00C6)	Radiation Type	CS	1
(300A,00C7)	High-Dose Technique Type	CS	1
(300A,00C8)	Reference Image Number	IS	1
(300A,00CA)	Planned Verification Image Sequence	SQ	1
(300A,00CC)	Imaging Device-Specific Acquisition Parameters	LO	1-n
(300A,00CE)	Treatment Delivery Type	CS	1
(300A,00D0)	Number of Wedges	IS	1
(300A,00D1)	Wedge Sequence	SQ	1
(300A,00D2)	Wedge Number	IS	1
(300A,00D3)	Wedge Type	CS	1
(300A,00D4)	Wedge ID	SH	1
(300A,00D5)	Wedge Angle	IS	1
(300A,00D6)	Wedge Factor	DS	1
(300A,00D8)	Wedge Orientation	DS	1
(300A,00DA)	Source to Wedge Tray Distance	DS	1
(300A,00E0)	Number of Compensators	IS	1
(300A,00E1)	Material ID	SH	1
(300A,00E2)	Total Compensator Tray Factor	DS	1
(300A,00E3)	Compensator Sequence	SQ	1

Tag	Name	VR	VM
(300A,00E4)	Compensator Number	IS	1
(300A,00E5)	Compensator ID	SH	1
(300A,00E6)	Source to Compensator Tray Distance	DS	1
(300A,00E7)	Compensator Rows	IS	1
(300A,00E8)	Compensator Columns	IS	1
(300A,00E9)	Compensator Pixel Spacing	DS	2
(300A,00EA)	Compensator Position	DS	2
(300A,00EB)	Compensator Transmission Data	DS	1-n
(300A,00EC)	Compensator Thickness Data	DS	1-n
(300A,00ED)	Number of Boli	IS	1
(300A,00EE)	Compensator Type	CS	1
(300A,00F0)	Number of Blocks	IS	1
(300A,00F2)	Total Block Tray Factor	DS	1
(300A,00F4)	Block Sequence	SQ	1
(300A,00F5)	Block Tray ID	SH	1
(300A,00F6)	Source to Block Tray Distance	DS	1
(300A,00F8)	Block Type	CS	1
(300A,00F9)	Accessory Code	LO	1
(300A,00FA)	Block Divergence	CS	1
(300A,00FB)	Block Mounting Position	CS	1
(300A,00FC)	Block Number	IS	1
(300A,00FE)	Block Name	LO	1
(300A,0100)	Block Thickness	DS	1
(300A,0102)	Block Transmission	DS	1
(300A,0104)	Block Number of Points	IS	1
(300A,0106)	Block Data	DS	2-2n
(300A,0107)	Applicator Sequence	SQ	1
(300A,0108)	Applicator ID	SH	1
(300A,0109)	Applicator Type	CS	1
(300A,010A)	Applicator Description	LO	1
(300A,010C)	Cumulative Dose Reference Coefficient	DS	1
(300A,010E)	Final Cumulative Meterset Weight	DS	1

Tag	Name	VR	VM
(300A,0110)	Number of Control Points	IS	1
(300A,0111)	Control Point Sequence	SQ	1
(300A,0112)	Control Point Index	IS	1
(300A,0114)	Nominal Beam Energy	DS	1
(300A,0115)	Dose Rate Set	DS	1
(300A,0116)	Wedge Position Sequence	SQ	1
(300A,0118)	Wedge Position	CS	1
(300A,011A)	Beam Limiting Device Position Sequence	SQ	1
(300A,011C)	Leaf/Jaw Positions	DS	2-2n
(300A,011E)	Gantry Angle	DS	1
(300A,011F)	Gantry Rotation Direction	CS	1
(300A,0120)	Beam Limiting Device Angle	DS	1
(300A,0121)	Beam Limiting Device Rotation Direction	CS	1
(300A,0122)	Patient Support Angle	DS	1
(300A,0123)	Patient Support Rotation Direction	CS	1
(300A,0124)	Table Top Eccentric Axis Distance	DS	1
(300A,0125)	Table Top Eccentric Angle	DS	1
(300A,0126)	Table Top Eccentric Rotation Direction	CS	1
(300A,0128)	Table Top Vertical Position	DS	1
(300A,0129)	Table Top Longitudinal Position	DS	1
(300A,012A)	Table Top Lateral Position	DS	1
(300A,012C)	Isocenter Position	DS	3
(300A,012E)	Surface Entry Point	DS	3
(300A,0130)	Source to Surface Distance	DS	1
(300A,0134)	Cumulative Meterset Weight	DS	1
(300A,0180)	Patient Setup Sequence	SQ	1
(300A,0182)	Patient Setup Number	IS	1
(300A,0184)	Patient Additional Position	LO	1
(300A,0190)	Fixation Device Sequence	SQ	1
(300A,0192)	Fixation Device Type	CS	1
(300A,0194)	Fixation Device Label	SH	1

Tag	Name	VR	VM
(300A,0196)	Fixation Device Description	ST	1
(300A,0198)	Fixation Device Position	SH	1
(300A,01A0)	Shielding Device Sequence	SQ	1
(300A,01A2)	Shielding Device Type	CS	1
(300A,01A4)	Shielding Device Label	SH	1
(300A,01A6)	Shielding Device Description	ST	1
(300A,01A8)	Shielding Device Position	SH	1
(300A,01B0)	Setup Technique	CS	1
(300A,01B2)	Setup Technique Description	ST	1
(300A,01B4)	Setup Device Sequence	SQ	1
(300A,01B6)	Setup Device Type	CS	1
(300A,01B8)	Setup Device Label	SH	1
(300A,01BA)	Setup Device Description	ST	1
(300A,01BC)	Setup Device Parameter	DS	1
(300A,01D0)	Setup Reference Description	ST	1
(300A,01D2)	Table Top Vertical Setup Displacement	DS	1
(300A,01D4)	Table Top Longitudinal Setup Displacement	DS	1
(300A,01D6)	Table Top Lateral Setup Displacement	DS	1
(300A,0200)	Brachy Treatment Technique	CS	1
(300A,0202)	Brachy Treatment Type	CS	1
(300A,0206)	Treatment Machine Sequence	SQ	1
(300A,0210)	Source Sequence	SQ	1
(300A,0212)	Source Number	IS	1
(300A,0214)	Source Type	CS	1
(300A,0216)	Source Manufacturer	LO	1
(300A,0218)	Active Source Diameter	DS	1
(300A,021A)	Active Source Length	DS	1
(300A,0222)	Source Encapsulation Nominal Thickness	DS	1
(300A,0224)	Source Encapsulation Nominal Transmission	DS	1
(300A,0226)	Source Isotope Name	LO	1
(300A,0228)	Source Isotope Half Life	DS	1
(300A,022A)	Reference Air Kerma Rate	DS	1

Tag	Name	VR	VM
(300A,022C)	Air Kerma Rate Reference Date	DA	1
(300A,022E)	Air Kerma Rate Reference Time	TM	1
(300A,0230)	Application Setup Sequence	SQ	1
(300A,0232)	Application Setup Type	CS	1
(300A,0234)	Application Setup Number	IS	1
(300A,0236)	Application Setup Name	LO	1
(300A,0238)	Application Setup Manufacturer	LO	1
(300A,0240)	Template Number	IS	1
(300A,0242)	Template Type	SH	1
(300A,0244)	Template Name	LO	1
(300A,0250)	Total Reference Air Kerma	DS	1
(300A,0260)	Brachy Accessory Device Sequence	SQ	1
(300A,0262)	Brachy Accessory Device Number	IS	1
(300A,0263)	Brachy Accessory Device ID	SH	1
(300A,0264)	Brachy Accessory Device Type	CS	1
(300A,0266)	Brachy Accessory Device Name	LO	1
(300A,026A)	Brachy Accessory Device Nominal Thickness	DS	1
(300A,026C)	Brachy Accessory Device Nominal Transmission	DS	1
(300A,0280)	Channel Sequence	SQ	1
(300A,0282)	Channel Number	IS	1
(300A,0284)	Channel Length	DS	1
(300A,0286)	Channel Total Time	DS	1
(300A,0288)	Source Movement Type	CS	1
(300A,028A)	Number of Pulses	IS	1
(300A,028C)	Pulse Repetition Interval	DS	1
(300A,0290)	Source Applicator Number	IS	1
(300A,0291)	Source Applicator ID	SH	1
(300A,0292)	Source Applicator Type	CS	1
(300A,0294)	Source Applicator Name	LO	1
(300A,0296)	Source Applicator Length	DS	1
(300A,0298)	Source Applicator Manufacturer	LO	1

Tag	Name	VR	VM
(300A,029C)	Source Applicator Wall Nominal Thickness	DS	1
(300A,029E)	Source Applicator Wall Nominal Transmission	DS	1
(300A,02A0)	Source Applicator Step Size	DS	1
(300A,02A2)	Transfer Tube Number	IS	1
(300A,02A4)	Transfer Tube Length	DS	1
(300A,02B0)	Channel Shield Sequence	SQ	1
(300A,02B2)	Channel Shield Number	IS	1
(300A,02B3)	Channel Shield ID	SH	1
(300A,02B4)	Channel Shield Name	LO	1
(300A,02B8)	Channel Shield Nominal Thickness	DS	1
(300A,02BA)	Channel Shield Nominal Transmission	DS	1
(300A,02C8)	Final Cumulative Time Weight	DS	1
(300A,02D0)	Brachy Control Point Sequence	SQ	1
(300A,02D2)	Control Point Relative Position	DS	1
(300A,02D4)	Control Point 3D Position	DS	3
(300A,02D6)	Cumulative Time Weight	DS	1
(300A,02E0)	Compensator Divergence	CS	1
(300A,02E1)	Compensator Mounting Position	CS	1
(300A,02E2)	Source to Compensator Distance	DS	1-n

Tag	Name	VR	VM
(300C,0002)	Referenced RT Plan Sequence	SQ	1
(300C,0004)	Referenced Beam Sequence	SQ	1
(300C,0006)	Referenced Beam Number	IS	1
(300C,0007)	Referenced Reference Image Number	IS	1
(300C,0008)	Start Cumulative Meterset Weight	DS	1
(300C,0009)	End Cumulative Meterset Weight	DS	1
(300C,000A)	Referenced Brachy Application Setup Sequence	SQ	1
(300C,000C)	Referenced Brachy Application Setup Number	IS	1
(300C,000E)	Referenced Source Number	IS	1
(300C,0020)	Referenced Fraction Group Sequence	SQ	1

Tag	Name	VR	VM
(300C,0022)	Referenced Fraction Group Number	IS	1
(300C,0040)	Referenced Verification Image Sequence	SQ	1
(300C,0042)	Referenced Reference Image Sequence	SQ	1
(300C,0050)	Referenced Dose Reference Sequence	SQ	1
(300C,0051)	Referenced Dose Reference Number	IS	1
(300C,0055)	Brachy Referenced Dose Reference Sequence	SQ	1
(300C,0060)	Referenced Structure Set Sequence	SQ	1
(300C,006A)	Referenced Patient Setup Number	IS	1
(300C,0080)	Referenced Dose Sequence	SQ	1
(300C,00A0)	Referenced Tolerance Table Number	IS	1
(300C,00B0)	Referenced Bolus Sequence	SQ	1
(300C,00C0)	Referenced Wedge Number	IS	1
(300C,00D0)	Referenced Compensator Number	IS	1
(300C,00E0)	Referenced Block Number	IS	1
(300C,00F0)	Referenced Control Point Index	IS	1

Tag	Name	VR	VM
(300E,0002)	Approval Status	CS	1
(300E,0004)	Review Date	DA	1
(300E,0005)	Review Time	TM	1
(300E,0008)	Reviewer Name	PN	1

Tag	Name	VR	VM
(4000,0010)	*Arbitrary*		*RET*
(4000,4000)	*Comments*		*RET*

Tag	Name	VR	VM
(4008,0040)	Results ID	SH	1

Tag	Name	VR	VM
(4008,0042)	Results ID Issuer	LO	1
(4008,0050)	Referenced Interpretation Sequence	SQ	1
(4008,0100)	Interpretation Recorded Date	DA	1
(4008,0101)	Interpretation Recorded Time	TM	1
(4008,0102)	Interpretation Recorder	PN	1
(4008,0103)	Reference to Recorded Sound	LO	1
(4008,0108)	Interpretation Transcription Date	DA	1
(4008,0109)	Interpretation Transcription Time	TM	1
(4008,010A)	Interpretation Transcriber	PN	1
(4008,010B)	Interpretation Text	ST	1
(4008,010C)	Interpretation Author	PN	1
(4008,0111)	Interpretation Approver Sequence	SQ	1
(4008,0112)	Interpretation Approval Date	DA	1
(4008,0113)	Interpretation Approval Time	TM	1
(4008,0114)	Physician Approving Interpretation	PN	1
(4008,0115)	Interpretation Diagnosis Description	LT	1
(4008,0117)	Interpretation Diagnosis Code Sequence	SQ	1
(4008,0118)	Results Distribution List Sequence	SQ	1
(4008,0119)	Distribution Name	PN	1
(4008,011A)	Distribution Address	LO	1
(4008,0200)	Interpretation ID	SH	1
(4008,0202)	Interpretation ID Issuer	LO	1
(4008,0210)	Interpretation Type ID	CS	1
(4008,0212)	Interpretation Status ID	CS	1
(4008,0300)	Impressions	ST	1
(4008,4000)	Results Comments	ST	1

Tag	Name	VR	VM
(4FFE,0001)	MAC Parameters Sequence	SQ	1

Tag	Name	VR	VM

Tag	Name	VR	VM
(50xx,0005)	Curve Dimensions	US	1
(50xx,0010)	Number of Points	US	1
(50xx,0020)	Type of Data	CS	1
(50xx,0022)	Curve Description	LO	1
(50xx,0030)	Axis Units	SH	1-n
(50xx,0040)	Axis Labels	SH	1-n
(50xx,0103)	Data Value Representation	US	1
(50xx,0104)	Minimum Coordinate Value	US	1-n
(50xx,0105)	Maximum Coordinate Value	US	1-n
(50xx,0106)	Curve Range	SH	1-n
(50xx,0110)	Curve Data Descriptor	US	1-n
(50xx,0112)	Coordinate Start Value	US	1-n
(50xx,0114)	Coordinate Step Value	US	1-n
(50xx,1001)	Curve Activation Layer	CS	1
(50xx,2000)	Audio Type	US	1
(50xx,2002)	Audio Sample Format	US	1
(50xx,2004)	Number of Channels	US	1
(50xx,2006)	Number of Samples	UL	1
(50xx,2008)	Sample Rate	UL	1
(50xx,200A)	Total Time	UL	1
(50xx,200C)	Audio Sample Data	OW or OB	1
(50xx,200E)	Audio Comments	LT	1
(50xx,2500)	Curve Label	LO	1
(50xx,2600)	Referenced Overlay Sequence	SQ	1
(50xx,2610)	Referenced Overlay Group	US	1
(50xx,3000)	Curve Data	OW or OB	1

Tag	Name	VR	VM
(5200,9229)	Shared Functional Groups Sequence	SQ	1

Tag	Name	VR	VM	
(5200,9230)	Per-frame Functional Groups Sequence	SQ	1	

Tag	Name	VR	VM	
(5400,0100)	Waveform Sequence	SQ	1	
(5400,0110)	Channel Minimum Value	OB or OW	1	
(5400,0112)	Channel Maximum Value	OB or OW	1	
(5400,1004)	Waveform Bits Allocated	US	1	
(5400,1006)	Waveform Sample Interpretation	CS	1	
(5400,100A)	Waveform Padding Value	OB or OW	1	
(5400,1010)	Waveform Data	OB or OW	1	

Tag	Name	VR	VM	
(5600,0010)	First Order Phase Correction Angle	OF	1	
(5600,0020)	Spectroscopy Data	OF	1	

Tag	Name	VR	VM	
(60xx,0010)	Overlay Rows	US	1	
(60xx,0011)	Overlay Columns	US	1	
(60xx,0012)	Overlay Planes	US	1	
(60xx,0015)	Number of Frames in Overlay	IS	1	
(60xx,0022)	Overlay Description	LO	1	
(60xx,0040)	Overlay Type	CS	1	
(60xx,0045)	Overlay Subtype	LO	1	
(60xx,0050)	Overlay Origin	SS	2	
(60xx,0051)	Image Frame Origin	US	1	
(60xx,0052)	Overlay Plane Origin	US	1	
(60xx,0060)	*Compression Code*			*RET*
(60xx,0100)	Overlay Bits Allocated	US	1	
(60xx,0102)	Overlay Bit Position	US	1	
(60xx,0110)	*Overlay Format*			*RET*
(60xx,0200)	*Overlay Location*			*RET*

Tag	Name	VR	VM	
(60xx,1001)	Overlay Activation Layer	CS	1	
(60xx,1100)	Overlay Descriptor – Gray	US	1	*RET*
(60xx,1101)	Overlay Descriptor – Red	US	1	*RET*
(60xx,1102)	Overlay Descriptor – Green	US	1	*RET*
(60xx,1103)	Overlay Descriptor – Blue	US	1	*RET*
(60xx,1200)	Overlays- Gray	US	1-n	*RET*
(60xx,1201)	Overlays – Red	US	1-n	*RET*
(60xx,1202)	Overlays – Green	US	1-n	*RET*
(60xx,1203)	Overlays- Blue	US	1-n	*RET*
(60xx,1301)	ROI Area	IS	1	
(60xx,1302)	ROI Mean	DS	1	
(60xx,1303)	ROI Standard Deviation	DS	1	
(60xx,1500)	Overlay Label	LO	1	
(60xx,3000)	Overlay Data	OB or OW	1	
(60xx,4000)	*Comments*			*RET*

Tag	Name	VR	VM
(7FE0,0010)	Pixel Data	OW or OB	1

Tag	Name	VR	VM
(FFFA,FFFA)	Digital Signatures Sequence	SQ	1

Tag	Name	VR	VM
(FFFC,FFFC)	Data Set Trailing Padding	OB	1

Tag	Name	VR	VM
(FFFE,E000)	Item	see note	1
(FFFE,E00D)	Item Delimitation Item	see note	1
(FFFE,E0DD)	Sequence Delimitation Item	see note	1

Tag	Name	VR	VM

Note: The VR for Data Elements, Item (FFFE,E000), Item Delimitation Item (FFFE,E00D), and Sequence Delimitation Item (FFFE,E0DD) do not exist. See PS 3.5 for explanation.

7 Registry of DICOM File Meta Elements

This section specifies the File Meta Elements needed to support the formatting of the File Meta Information of the DICOM File Format (See PS 3.10).

Tag	Name	VR	VM
(0002,0000)	Group Length	UL	1
(0002,0001)	File Meta Information Version	OB	1
(0002,0002)	Media Storage SOP Class UID	UI	1
(0002,0003)	Media Storage SOP Instance UID	UI	1
(0002,0010)	Transfer Syntax UID	UI	1
(0002,0012)	Implementation Class UID	UI	1
(0002,0013)	Implementation Version Name	SH	1
(0002,0016)	Source Application Entity Title	AE	1
(0002,0100)	Private Information Creator UID	UI	1
(0002,0102)	Private Information	OB	1

8 Registry of DICOM directory structuring elements

Tag	Name	VR	VM
(0004,0000)	Group Length	UL	1
(0004,1130)	File-set ID	CS	1
(0004,1141)	File-set Descriptor File ID	CS	1-8
(0004,1142)	Specific Character Set of File-set Descriptor File	CS	1
(0004,1200)	Offset of the First Directory Record of the Root Directory Entity	UL	1
(0004,1202)	Offset of the Last Directory Record of the Root Directory Entity	UL	1
(0004,1212)	File-set Consistency Flag	US	1
(0004,1220)	Directory Record Sequence	SQ	1
(0004,1400)	Offset of the Next Directory Record	UL	1
(0004,1410)	Record In-use Flag	US	1
(0004,1420)	Offset of Referenced Lower-Level Directory Entity	UL	1
(0004,1430)	Directory Record Type	CS	1
(0004,1432)	Private Record UID	UI	1
(0004,1500)	Referenced File ID	CS	1-8
(0004,1504)	MRDR Directory Record Offset	UL	1
(0004,1510)	Referenced SOP Class UID in File	UI	1
(0004,1511)	Referenced SOP Instance UID in File	UI	1
(0004,1512)	Referenced Transfer Syntax UID in File	UI	1
(0004,151A)	Referenced Related General SOP Class UID in File	UI	1-n
(0004,1600)	Number of References	UL	1

Annex A Registry of DICOM unique identifiers (UID) (Normative)

Table A-1 lists the UID values that are registered and used throughout the Parts of the DICOM Standard. This central registry ensures that when additional UIDs are assigned, non-duplicate values are assigned.

Table A-1
UID VALUES

UID Value	UID NAME	UID TYPE	Part
1.2.840.10008.1.1	Verification SOP Class	SOP Class	PS 3.4
1.2.840.10008.1.2	Implicit VR Little Endian: Default Transfer Syntax for DICOM	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.1	Explicit VR Little Endian	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.1.99	Deflated Explicit VR Little Endian	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.2	Explicit VR Big Endian	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.50	JPEG Baseline (Process 1): Default Transfer Syntax for Lossy JPEG 8 Bit Image Compression	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.51	JPEG Extended (Process 2 & 4): Default Transfer Syntax for Lossy JPEG 12 Bit Image Compression (Process 4 only)	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.52	*JPEG Extended (Process 3 & 5) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.53	*JPEG Spectral Selection, Non-Hierarchical (Process 6 & 8) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.54	*JPEG Spectral Selection, Non-Hierarchical (Process 7 & 9) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.55	*JPEG Full Progression, Non-Hierarchical (Process 10 & 12) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.56	*JPEG Full Progression, Non-Hierarchical (Process 11 & 13) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.57	JPEG Lossless, Non-Hierarchical (Process 14)	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.58	*JPEG Lossless, Non-Hierarchical (Process 15) (Retired)*	*Transfer Syntax*	*PS 3.5*

1.2.840.10008.1.2.4.59	*JPEG Extended, Hierarchical (Process 16 & 18) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.60	*JPEG Extended, Hierarchical (Process 17 & 19) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.61	*JPEG Spectral Selection, Hierarchical (Process 20 & 22) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.62	*JPEG Spectral Selection, Hierarchical (Process 21 & 23) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.63	*JPEG Full Progression, Hierarchical (Process 24 & 26) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.64	*JPEG Full Progression, Hierarchical (Process 25 & 27) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.65	*JPEG Lossless, Hierarchical (Process 28) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.66	*JPEG Lossless, Hierarchical (Process 29) (Retired)*	*Transfer Syntax*	*PS 3.5*
1.2.840.10008.1.2.4.70	JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1]): Default Transfer Syntax for Lossless JPEG Image Compression	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.80	JPEG-LS Lossless Image Compression	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.81	JPEG-LS Lossy (Near-Lossless) Image Compression	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.90	JPEG 2000 Image Compression (Lossless Only)	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.91	JPEG 2000 Image Compression	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.4.100	MPEG2 Main Profile @ Main Level	Transfer Syntax	PS 3.5
1.2.840.10008.1.2.5	RLE Lossless	Transfer Syntax	PS 3.5
1.2.840.10008.1.3.10	Media Storage Directory Storage	SOP Class	PS 3.4
1.2.840.10008.1.4.1.1	Talairach Brain Atlas Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.2	SPM2 T1 Frame of Reference	Well-known frame of reference	

1.2.840.10008.1.4.1.3	SPM2 T2 Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.4	SPM2 PD Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.5	SPM2 EPI Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.6	SPM2 FIL T1 Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.7	SPM2 PET Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.8	SPM2 TRANSM Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.9	SPM2 SPECT Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.10	SPM2 GRAY Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.11	SPM2 WHITE Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.12	SPM2 CSF Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.13	SPM2 BRAINMASK Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.14	SPM2 AVG305T1 Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.15	SPM2 AVG152T1 Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.16	SPM2 AVG152T2 Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.17	SPM2 AVG152PD Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.1.18	SPM2 SINGLESUBJT1 Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.2.1	ICBM 452 T1 Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.4.2.2	ICBM Single Subject MRI Frame of Reference	Well-known frame of reference	
1.2.840.10008.1.9	Basic Study Content Notification SOP Class	SOP Class	PS 3.4
1.2.840.10008.1.20.1	Storage Commitment Push Model SOP Class	SOP Class	PS 3.4

1.2.840.10008.1.20.1.1	Storage Commitment Push Model SOP Instance	Well-known SOP Instance	PS 3.4
1.2.840.10008.1.20.2	*Storage Commitment Pull Model SOP Class (Retired)*	*SOP Class*	*PS 3.4*
1.2.840.10008.1.20.2.1	*Storage Commitment Pull Model SOP Instance (Retired)*	*Well-known SOP Instance*	*PS 3.4*
1.2.840.10008.1.40	Procedural Event Logging SOP Class	SOP Class	PS 3.4
1.2.840.10008.1.40.1	Procedural Event Logging SOP Instance	Well-known SOP Instance	PS 3.4
1.2.840.10008.2.16.4	DICOM Controlled Terminology	Coding Scheme	PS 3.16
1.2.840.10008.3.1.1.1	DICOM Application Context Name	Application Context Name	PS 3.7
1.2.840.10008.3.1.2.1.1	Detached Patient Management SOP Class	SOP Class	PS 3.4
1.2.840.10008.3.1.2.1.4	Detached Patient Management Meta SOP Class	Meta SOP Class	PS 3.4
1.2.840.10008.3.1.2.2.1	Detached Visit Management SOP Class	SOP Class	PS 3.4
1.2.840.10008.3.1.2.3.1	Detached Study Management SOP Class	SOP Class	PS 3.4
1.2.840.10008.3.1.2.3.2	Study Component Management SOP Class	SOP Class	PS 3.4
1.2.840.10008.3.1.2.3.3	Modality Performed Procedure Step SOP Class	SOP Class	PS 3.4
1.2.840.10008.3.1.2.3.4	Modality Performed Procedure Step Retrieve SOP Class	SOP Class	PS 3.4
1.2.840.10008.3.1.2.3.5	Modality Performed Procedure Step Notification SOP Class	SOP Class	PS 3.4
1.2.840.10008.3.1.2.5.1	Detached Results Management SOP Class	SOP Class	PS 3.4
1.2.840.10008.3.1.2.5.4	Detached Results Management Meta SOP Class	Meta SOP Class	PS 3.4
1.2.840.10008.3.1.2.5.5	Detached Study Management Meta SOP Class	Meta SOP Class	PS 3.4
1.2.840.10008.3.1.2.6.1	Detached Interpretation Management SOP Class	SOP Class	PS 3.4
1.2.840.10008.4.2	Storage Service Class	Service Class	PS 3.4
1.2.840.10008.5.1.1.1	Basic Film Session SOP Class	SOP Class	PS 3.4

1.2.840.10008.5.1.1.2	Basic Film Box SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.4	Basic Grayscale Image Box SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.4.1	Basic Color Image Box SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.4.2	*Referenced Image Box SOP Class (Retired)*	*SOP Class*	*PS 3.4*
1.2.840.10008.5.1.1.9	Basic Grayscale Print Management Meta SOP Class	Meta SOP Class	PS 3.4
1.2.840.10008.5.1.1.9.1	*Referenced Grayscale Print Management Meta SOP Class (Retired)*	*Meta SOP Class*	*PS 3.4*
1.2.840.10008.5.1.1.14	Print Job SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.15	Basic Annotation Box SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.16	Printer SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.16.376	Printer Configuration Retrieval SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.17	Printer SOP Instance	Well-known Printer SOP Instance	PS 3.4
1.2.840.10008.5.1.1.17.376	Printer Configuration Retrieval SOP Instance	Well-known Printer SOP Instance	PS 3.4
1.2.840.10008.5.1.1.18	Basic Color Print Management Meta SOP Class	Meta SOP Class	PS 3.4
1.2.840.10008.5.1.1.18.1	*Referenced Color Print Management Meta SOP Class (Retired)*	*Meta SOP Class*	*PS 3.4*
1.2.840.10008.5.1.1.22	VOI LUT Box SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.23	Presentation LUT SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.24	*Image Overlay Box SOP Class (Retired)*	*SOP Class*	*PS 3.4*
1.2.840.10008.5.1.1.24.1	Basic Print Image Overlay Box SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.25	Print Queue SOP Instance	Well-known Print Queue SOP Instance	PS 3.4
1.2.840.10008.5.1.1.26	Print Queue Management SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.27	Stored Print Storage SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.29	Hardcopy Grayscale Image	SOP Class	PS 3.4

	Storage SOP Class		
1.2.840.10008.5.1.1.30	Hardcopy Color Image Storage SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.31	Pull Print Request SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.1.32	Pull Stored Print Management Meta SOP Class	Meta SOP Class	PS 3.4
1.2.840.10008.5.1.1.33	Media Creation Management SOP Class UID	SOP Class	PS3.4
1.2.840.10008.5.1.4.1.1.1	Computed Radiography Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.1.1	Digital X-Ray Image Storage – For Presentation	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.1.1.1	Digital X-Ray Image Storage – For Processing	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.1.2	Digital Mammography X-Ray Image Storage – For Presentation	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.1.2.1	Digital Mammography X-Ray Image Storage – For Processing	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.1.3	Digital Intra-oral X-Ray Image Storage – For Presentation	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.1.3.1	Digital Intra-oral X-Ray Image Storage – For Processing	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.2	CT Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.2.1	Enhanced CT Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.3	*Ultrasound Multi-frame Image Storage (Retired)*	*SOP Class*	*PS 3.4*
1.2.840.10008.5.1.4.1.1.3.1	Ultrasound Multi-frame Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.4	MR Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.4.1	Enhanced MR Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.4.2	MR Spectroscopy Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.5	*Nuclear Medicine Image Storage (Retired)*	*SOP Class*	*PS 3.4*
1.2.840.10008.5.1.4.1.1.6	*Ultrasound Image Storage (Retired)*	*SOP Class*	*PS 3.4*
1.2.840.10008.5.1.4.1.1.6.1	Ultrasound Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.7	Secondary Capture Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.7.1	Multi-frame Single Bit Secondary	SOP Class	PS 3.4

	Capture Image Storage		
1.2.840.10008.5.1.4.1.1.7.2	Multi-frame Grayscale Byte Secondary Capture Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.7.3	Multi-frame Grayscale Word Secondary Capture Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.7.4	Multi-frame True Color Secondary Capture Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.8	Standalone Overlay Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.9	Standalone Curve Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.9.1.1	12-lead ECG Waveform Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.9.1.2	General ECG Waveform Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.9.1.3	Ambulatory ECG Waveform Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.9.2.1	Hemodynamic Waveform Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.9.3.1	Cardiac Electrophysiology Waveform Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.9.4.1	Basic Voice Audio Waveform Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.10	Standalone Modality LUT Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.11	Standalone VOI LUT Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.11.1	Grayscale Softcopy Presentation State Storage SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.12.1	X-Ray Angiographic Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.12.2	X-Ray Radiofluoroscopic Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.12.3	*X-Ray Angiographic Bi-Plane Image Storage (Retired)*	*SOP Class*	*PS 3.4*
1.2.840.10008.5.1.4.1.1.20	Nuclear Medicine Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.66	Raw Data Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.66.1	Spatial Registration Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.66.2	Spatial Fiducials Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1	*VL Image Storage (Retired)*		
1.2.840.10008.5.1.4.1.1.77.2	*VL Multi-frame Image Storage (Retired)*		
1.2.840.10008.5.1.4.1.1.77.1.1	VL Endoscopic Image Storage	SOP Class	PS 3.4

1.2.840.10008.5.1.4.1.1.77.1.1.1	Video Endoscopic Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1.2	VL Microscopic Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1.2.1	Video Microscopic Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1.3	VL Slide-Coordinates Microscopic Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1.4	VL Photographic Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1.4.1	Video Photographic Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1.5.1	Ophthalmic Photography 8 Bit Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1.5.2	Ophthalmic Photography 16 Bit Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.77.1.5.3	Stereometric Relationship Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.88.11	Basic Text SR	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.88.22	Enhanced SR	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.88.33	Comprehensive SR	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.88.40	Procedure Log Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.88.50	Mammography CAD SR	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.88.59	Key Object Selection Document	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.88.65	Chest CAD SR	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.128	Positron Emission Tomography Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.129	Standalone PET Curve Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.481.1	RT Image Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.481.2	RT Dose Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.481.3	RT Structure Set Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.481.4	RT Beams Treatment Record Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.481.5	RT Plan Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.481.6	RT Brachy Treatment Record Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.1.481.7	RT Treatment Summary Record Storage	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.2.1.1	Patient Root Query/Retrieve Information Model – FIND	SOP Class	PS 3.4

1.2.840.10008.5.1.4.1.2.1.2	Patient Root Query/Retrieve Information Model – MOVE	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.2.1.3	Patient Root Query/Retrieve Information Model – GET	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.2.2.1	Study Root Query/Retrieve Information Model – FIND	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.2.2.2	Study Root Query/Retrieve Information Model – MOVE	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.2.2.3	Study Root Query/Retrieve Information Model – GET	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.2.3.1	Patient/Study Only Query/Retrieve Information Model - FIND	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.2.3.2	Patient/Study Only Query/Retrieve Information Model - MOVE	SOP Class	PS 3.4
1.2.840.10008.5.1.4.1.2.3.3	Patient/Study Only Query/Retrieve Information Model - GET	SOP Class	PS 3.4
1.2.840.10008.5.1.4.31	Modality Worklist Information Model – FIND	SOP Class	PS 3.4
1.2.840.10008.5.1.4.32.1	General Purpose Worklist Information Model – FIND	SOP Class	PS 3.4
1.2.840.10008.5.1.4.32.2	General Purpose Scheduled Procedure Step SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.4.32.3	General Purpose Performed Procedure Step SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.4.32	General Purpose Worklist Management Meta SOP Class	Meta SOP Class	PS 3.4
1.2.840.10008.5.1.4.33	Instance Availability Notification SOP Class	SOP Class	PS 3.4
1.2.840.10008.5.1.4.37.1	General Relevant Patient Information Query	SOP Class	PS 3.4
1.2.840.10008.5.1.4.37.2	Breast Imaging Relevant Patient Information Query	SOP Class	PS 3.4
1.2.840.10008.5.1.4.37.3	Cardiac Relevant Patient Information Query	SOP Class	PS 3.4
1.2.840.10008.15.0.3.1	dicomDeviceName	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.2	dicomDescription	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.3	dicomManufacturer	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.4	dicomManufacturerModelName	LDAP OID	PS 3.15

1.2.840.10008.15.0.3.5	dicomSoftwareVersion	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.6	dicomVendorData	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.7	dicomAETitle	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.8	dicomNetworkConnectionReference	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.9	dicomApplicationCluster	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.10	dicomAssociationInitiator	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.11	dicomAssociationAcceptor	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.12	dicomHostname	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.13	dicomPort	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.14	dicomSOPClass	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.15	dicomTransferRole	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.16	dicomTransferSyntax	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.17	dicomPrimaryDeviceType	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.18	dicomRelatedDeviceReference	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.19	dicomPreferredCalledAETitle	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.20	dicomTLSCyphersuite	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.21	dicomAuthorizedNodeCertificateReference	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.22	dicomThisNodeCertificateReference	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.23	dicomInstalled	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.24	dicomStationName	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.25	dicomDeviceSerialNumber	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.26	dicomInstitutionName	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.27	dicomInstitutionAddress	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.28	dicomInstitutionDepartmentName	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.29	dicomIssuerOfPatientID	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.30	dicomPreferredCallingAETitle	LDAP OID	PS 3.15
1.2.840.10008.15.0.3.31	dicomSupportedCharacterSet	LDAP OID	PS 3.15
1.2.840.10008.15.0.4.1	dicomConfigurationRoot	LDAP OID	PS 3.15

1.2.840.10008.15.0.4.2	dicomDevicesRoot	LDAP OID	PS 3.15
1.2.840.10008.15.0.4.3	dicomUniqueAETitlesRegistryRoot	LDAP OID	PS 3.15
1.2.840.10008.15.0.4.4	dicomDevice	LDAP OID	PS 3.15
1.2.840.10008.15.0.4.5	dicomNetworkAE	LDAP OID	PS 3.15
1.2.840.10008.15.0.4.6	dicomNetworkConnection	LDAP OID	PS 3.15
1.2.840.10008.15.0.4.7	dicomUniqueAETitle	LDAP OID	PS 3.15
1.2.840.10008.15.0.4.8	dicomTransferCapability	LDAP OID	PS 3.15

Table A-2
Well-known Frames of Reference

UID Value	UID NAME	Normative Reference
1.2.840.10008.1.4.1.1	Talairach Brain Atlas Frame of Reference	Talairach J. and Tournoux P. *Co-Planar stereotactic atlas of the human brain*. Stutgart: Georg Thieme Verlag, 1988.
1.2.840.10008.1.4.1.2	SPM2 T1 Frame of Reference	SPM2 /templates/T1.mnc
1.2.840.10008.1.4.1.3	SPM2 T2 Frame of Reference	SPM2 /templates/T2.mnc
1.2.840.10008.1.4.1.4	SPM2 PD Frame of Reference	SPM2 /templates/PD.mnc
1.2.840.10008.1.4.1.5	SPM2 EPI Frame of Reference	SPM2 /templates/EPI.mnc
1.2.840.10008.1.4.1.6	SPM2 FIL T1 Frame of Reference	SPM2 /templates/filT1.mnc
1.2.840.10008.1.4.1.7	SPM2 PET Frame of Reference	SPM2 /templates/PET.mnc
1.2.840.10008.1.4.1.8	SPM2 TRANSM Frame of Reference	SPM2 /templates/Transm.mnc
1.2.840.10008.1.4.1.9	SPM2 SPECT Frame of Reference	SPM2 /templates/SPECT.mnc
1.2.840.10008.1.4.1.10	SPM2 GRAY Frame of Reference	SPM2 /apriori/gray.mnc
1.2.840.10008.1.4.1.11	SPM2 WHITE Frame of Reference	SPM2 /apriori/white.mnc
1.2.840.10008.1.4.1.12	SPM2 CSF Frame of Reference	SPM2 /apriori/csf.mnc
1.2.840.10008.1.4.1.13	SPM2 BRAINMASK Frame of Reference	SPM2 /apriori/brainmask.mnc
1.2.840.10008.1.4.1.14	SPM2 AVG305T1 Frame of Reference	SPM2 /canonical/avg305T1.mnc

1.2.840.10008.1.4.1.15	SPM2 AVG152T1 Frame of Reference	SPM2 /canonical/avg152T1.mnc
1.2.840.10008.1.4.1.16	SPM2 AVG152T2 Frame of Reference	SPM2 /canonical/avg152T2.mnc
1.2.840.10008.1.4.1.17	SPM2 AVG152PD Frame of Reference	SPM2 /canonical/avg152PD.mnc
1.2.840.10008.1.4.1.18	SPM2 SINGLESUBJT1 Frame of Reference	SPM2 /canonical/single_subj_T1.mnc
1.2.840.10008.1.4.2.1	ICBM 452 T1 Frame of Reference	ICBM452 T1 Atlas
1.2.840.10008.1.4.2.2	ICBM Single Subject MRI Frame of Reference	ICBM Single Subject MRI Anatomical Template

SPM2 (Statistical Parametric Mapping) templates are available at http://www.fil.ion.ucl.ac.uk/~spm/, and they are described at http://www.fil.ion.ucl.ac.uk/~spm/templates/.

ICBM templates are available at http://www.loni.ucla.edu/ICBM/ICBM_ICBMAtlases.html.